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A DAISY RIVER APPROPRIATION.

Senator Carter has perhaps been reviled enough for being chosen to talk the river and harbor bill to death. He fulfilled his mission and now has a \$5,000 job, not having been re-elected to the Senate. Let us see how he tore up one of the looked for appropriations. Four million dollars for the improvement of Trinity river, Texas, itemized as follows:

For cleaning the river.....	\$ 500,000
For 37 locks and movable dams.....	3,175,000
For artificial water supply.....	200,000
For bank protection.....	100,000
For dredging.....	25,000
Total.....	\$4,000,000

What this meant was practically the building of a navigable course, Trinity river having but four feet of tide water at its mouth, and the improvements required being as follows according to the report accompanying the recommendation:

First—Cut down all the timber that would be likely to be washed into the river in time of flood. Second—During low water collect the drift wood and burn it. Third—When the stream is dry, pull out the snags and burn them. Fourth—Dig a canal through the bed of the river. Fifth—Dig artesian wells at the head of the river so as to get water. Sixth—Construct thirty-seven locks and dams to hold the well-water till needed.

This is the way Senator Carter attacked the scheme: "Does this not really pass belief that we are entering upon a project to spend \$4,000,000 of public money, enough to buy 6,000,000 bushels of wheat in Minnesota, in order to make navigable a stream from which you must first take out the logs in the bottom and burn them, then clean out all the logs on the banks so that they will not roll into the river again and block it? Then, strange, startling, you have not water to run in the river to fill the locks and dams until you dig artesian wells at the head of it."

RELATIVE EFFICIENCY OF THE STEAM AND GAS ENGINE.

In a paper read at the February meeting of the American Institute of Electrical Engineers, Mr. W. J. Hammer quoted the following from a letter written by Prof. R. H. Thurston, in reply to a request for an opinion as to the relative efficiency of steam and gas engines:

The best work, to date, is practically the same for both engines. Each has delivered the net horse-power with a consumption equivalent to about 1 lb. of good coal. The consumption of such fuel for efficiency unity would be about one-fifth of a pound per horse-power, and the engines have thus both attained an efficiency, between the coal pile and the point of delivery, of about 20 per cent.

The steam engine has attained so nearly its limit that further progress under commercial conditions would seem to be likely to be hereafter very slow and to be dependent mainly upon the possibility of increasing the thermodynamic efficiency by extending the thermodynamic range of working temperatures. In the steam engine this range may be increased either by still further increasing the working pressure at the boiler, or by superheating the steam or by both expedients combined. Higher pressures are coming to be available, with progress in the construction of high pressure, presumably water-tube boilers, and we have, in Sibley College work, employed over a thousand pounds without special difficulty, and I have no doubt that we can quite as well, as did Perkins two generations ago, use pressure of 2,000 lbs. and probably more. We are now beginning to find practical methods of construction and use of superheaters for ordinary pressures, and I have little doubt that we will be able to superheat steam of those higher pressures in course of time. These improvements should permit the

increase of efficiencies by something like 50 per cent. and bring the consumption of fuel down to three-fourths of a pound of good fuel per horse-power hour, and perhaps within the next generation, if not within ten years.

I am not prepared to say what should be hoped for with the gas engine, but the indications at the moment would seem to be that, as we have a very much larger opportunity to reduce wastes that now characterize the gas engine than to extinguish those affecting the steam engine, more should be expected from the coming years with the former than with the latter. The gas engine has only now come to be a formidable rival of the steam engine and is gaining upon it rapidly. The deduction seems fair, therefore, that the next few years should see the gas engine so much improved as to permit it, for many places and purposes, to become a successful rival. In some directions, as at sea; in the locomotive, and perhaps in some other departments, it is possible that steam may continue to hold its place unchallenged, but this is by no means certain.

It is unquestionably the fact that to-day the gas engine is steadily overhauling the steam engine and as steadily displacing it in many directions. I think it extremely possible that it may ultimately displace it very largely, but I think that the steam engine is likely to hold a place among economically available prime movers for a long time to come, and no one can say what may be anticipated to follow its further improvement by effectively combining a maximum range of pressure and a maximum range of coincident temperature, the one giving maximum mechanical efficiency and the other maximum thermodynamic, the combination yielding what is the main object of selection in practically all cases—production of power with minimum costs on all accounts, production of power with least reduction of dividend-paying capacity.

ALIEN LABOR LAW.

In the Dominion parliament on Saturday the Premier introduced a bill amending the alien labor law, enabling each province to enforce the law without reference to Ottawa, as the old law required, and making it a violation of the law to bring into Canada men who have been advertised for in United States papers.

These two changes are at the instance of labor men, and will mean practical exclusion of workingmen because each province has asked for more stringent laws against the states. Under the present law sixteen Americans were deported from Rossland on Friday, and the Premier says the new law will be as rigidly enforced, or even more so, than that of the United States.

This is simply a right and proper retaliation, at some of our lake ports even a deck hand could not ship if it was known that he had crossed from Canada. The immigration officer at Buffalo has perhaps been the most insane on the subject of sailors shipping than any other agent and he would deport them on the slightest provocation.

COMMERCIAL Agent Beutelspacher, of Moncton, informs the department, January 1, 1901, that contracts have been let for the building of a number of steam launches to guard the fisheries at the mouth of the Fraser river and for a steam cruiser to patrol the coast of British Columbia. The contract for the former, which will cost between \$7,000 and \$3,000, has been awarded to the Albion Iron Works, of Victoria, British Columbia. The launches will be 60 feet long. A. Wallace, of Vancouver, has obtained the contract for building the cruiser, the expenditure upon which will be between \$60,000 and \$70,000. The vessel will be a three-masted schooner, 130 feet in length, and will have a guaranteed speed of 12 knots an hour.

STEAMERS FOR THE WEST INDIA FRUIT TRADE.

Jno. C. Freeman, Esq., U. S. Consul, Copenhagen informs the department that seven new steamers have just been ordered for the fruit trade between the West India Islands and the United States. The contract for one of them—the Taunton—with the option of two others, has been signed between the United Fruit Co., and Messrs. Burmeister & Hains, extensive shipbuilders of Copenhagen. Three of the seven will be built in England, three in Norway, one in Denmark, with a possibility of two more at Copenhagen. The United Fruit Co., has already over twenty steamers in the banana trade from the West Indies to American ports. These vessels are registered as Norwegian, but it is understood that the bulk of capital invested is American. This company is also adding to its fleet two steel steamers for use in carrying fruit on the Great Lakes.

The Taunton, which may be taken as a typical steamer of the banana fleet, will be a spar deck vessel 227 feet long, 32 feet beam, with a depth of 23 feet. She will have a registry of 2,000 tons net, although her usual load will be about 1,000 tons. With this load she will draw 14 feet of water, and her engines will give her a speed of 13 knots an hour. Besides her cargo she will have accommodations for thirty passengers. Burmeister & Hains have contracted to deliver the vessel complete for 400,000 kroner (\$107,200).

RULE OF THE ROAD—CANADIAN VIEWS.

There was a large attendance at the meeting held on Saturday in Toronto of the National Masters' and Mates' Association of Canada. Various matters were discussed, principal among which was the present system of signaling. The meeting protested against the present code of whistles, claiming that the cross whistle given when steamers are approaching each other endangers collision. It was recommended that the Government be asked to amend the law governing whistles, to the effect that the steamer giving the first whistle hold the right of way, and the one approaching stop or "go astern," instead of answering by cross whistles, and remaining in the same course, as is done at present. Mr. Thomas Mulvey, Proctor in Admiralty, was appointed solicitor for the association. Eight new members were admitted to membership.

HULL AND BOILER INSPECTORS WANTED.

The United States Civil Service Commission announces that on April 23, 1901, an examination will be held in any city in the United States where postal free delivery has been established for the positions of inspector of boilers and assistant inspector of hulls and boilers in the Steamboat Inspection Service.

Information relative to the subjects and scope of the examinations may be found in sections 157-159 of the Manual of Examinations revised to January 1, 1901.

Age limit, 25 to 55 years.

From the eligibles resulting from this examination it is expected that certification will be made to the position of inspector of boilers at Nashville, Tenn., at a salary of \$1,200 per annum, a similar position at Dubuque, Iowa, at \$1,500 per annum, and to the position of assistant inspector of hulls and assistant inspector of boilers at Seattle, Wash., at a salary of \$1,200 per annum each, and to other similar vacancies as they shall occur.

Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application form 1087 which should be properly executed and promptly filed with the commission. The regulation providing that applications be filed at least ten days prior to the date of the examination will be waived.



DETROIT.

Special Correspondence to The Marine Record.

As George Uhler passes through Cleveland on Tuesday, it is expected that he will make some arrangements to change the aspect of the present situation.

The funeral of Capt. Eber McQueen took place from his home at St. Clair. Capt. McQueen was one of the best known masters on the lakes, and since the steamer Senator was placed in service has been her commander.

The wooden propeller Saginaw, owned by Alvin Peters of Toledo for a number of years, has been purchased by C. W. Kotcher of Detroit for \$16,000. She will be continued in the lumber service. The Saginaw was built in 1866, is 194 feet in length and carries 430 net tons.

Capt. J. E. Bussey, who was well known here, is dangerously ill in Chicago, suffering from a stroke of paralysis. Capt. Bussey, who is a brother of George Bussey, of this city, was a fine specimen of physical strength. He was over six feet in height and weighed over 250 pounds.

David Carter, general manager of the Detroit & Cleveland line, visited his business office Tuesday forenoon for the first time in seven weeks. Mr. Carter has nearly recovered from the results of a dangerously severe attack of the grip, which at one time threatened to end his life. Mr. Carter remained at his office but a short time.

Major Rothwell, of Windsor, Ont., has encountered a snag in connection with his scheme to establish an independent line of ferry steamers between Detroit and Windsor. It is a clause in the perpetual franchise of the Detroit, Belle Isle and Windsor Ferry Co., guaranteeing that no other ferry company shall be allowed to use any dock one mile east or west of the present ferry dock in Windsor.

Capt. George W. Bryce, last season in the Wallula, would like to make a run for Capt. Sid. Millen's hull inspectorship. Many masters will envy the successful candidate as the berth pays \$1,800 per year and all night in. I wouldn't say political pull but strong recommendations from influential state and national legislators might do no harm for the aspirant to place where they would do the most good. Civil service rules are all right but good backing is better.

Consulting Engineer Frank E. Kirby, having completed the plans and specifications for two side-wheel steamers, 366 ft. over all, it now looks as if the Detroit & Buffalo Steamship Co. meant business. Instead of a walking beam, they are to have triple-expansion engines, developing 5,000 horsepower, and be licensed to carry 3,500 passengers, though I take it that this is more of an excursion permit. The staterooms are to number 250, and the cabins, etc., are to be elaborately finished.

Capt. James Davidson, of West Bay City has entered into a contract to build for Frank Perry, of Sault Ste. Marie, two lighters, each 100 feet long, with 35 feet beam and 10 feet depth. They are to be used for carrying coal and pulpwood between Sault Ste. Marie and other points and will be ready for delivery toward the close of May. Considerable timber has been delivered at Capt. Davidson's yard during the past two months and it is said that some of it will be used in the construction of a good sized tow barge to be begun between now and June.

William H. Stevens, a retired capitalist and at one time a prominent miner in Colorado, died at his residence at Highland Park, a suburb of the city, last week, aged 80 years. In company with L. Z. Leiter, of Chicago, Capt. Stevens organized the Iron Silver Mining Co., in Leadville, Col., in 1875, which operated one of the first lead and silver mines in the state. For 20 years Capt. Stevens lived in the Lake Superior region and during that time he located about 100,000 acres of timber and mineral lands for eastern capitalists. He was born in Geneva, N. Y.

Local Steamboat Inspectors Galwey and Millen have made their report to Supervising Inspector Westcott in the Martha-Wilbur collision. After examining Capt. C. E. Fuller, of the Wilbur, and Capt. Donald Gillies, of the Troy, the inspectors say: "We have not found any violation of the rules on the part of the masters, and therefore we do not attach any blame on either for the collision. This may seem contrary to the decision of Judge Swan, who held the Wilbur and Mariposa to blame, but the inspectors simply conducted the case on the ground of whether either captains had broken any rules of navigation, and do not go into any other relevant facts in the case."

A government official here says that before the strike is over it may get into the hands of the Government. He says that when engineers and captains get their licenses, they must swear to observe certain rules and regulations, and to run their boats for the benefit of the public. Any conspiracy between the engineers and captains is liable to meet with governmental opposition, if the owners of boats make any complaint. The handicapping of the public service in this

way has more than once fallen under the jurisdiction of the government. Oh, pish! this official has already got the men aboard of a vessel under an agreement, he ought to talk insubordination, refusing to obey orders and mutiny or something solid like barratry. All the licenses the local inspectors of steamboats ever issued won't force the holders to use them.

Mr. B. W. Parker, one of the managers of the White Star line, states that the company had decided to build a new boat, and that Frank E. Kirby was now working on the plans. The new boat is to have a capacity of 2,500 people, or just one-half the capacity of the Tashmoo. Difficulty in obtaining steel to build the new steamer, and the fact that the shipyards are very busy, may delay the completion of the new boat until after the season. The Tashmoo, says Mr. Parker, will soon be prepared for the contemplated race which is to take place some day between June 1 and 10 next, with the City of Erie, the C. & B. boat. It is not thought the strike among the engineers will affect this interesting race, as the passenger boat lines does not belong to the Lake Carriers' Association. Well, perhaps they will spare a day to race the boats for nixey during the busiest part of the season, and perhaps not.

George L. McCurdy of Chicago, one of the best known marine underwriters on the lakes, visited here this week, in company with a number of Detroit vesselmen, who are interested in the organization of the new Sea & Lake Insurance Co. C. L. Freer, F. J. Hecker, Alexander McVittie, John Pridgeon, Jr., L. C. Waldo, A. A. Parker, B. W. Parker, W. C. McMillan, David Carter, John C. Shaw, Frank E. Kirby, S. T. Crapo, and C. A. Eddy, of Bay City are among the local stockholders in the company, and A. A. & B. W. Parker are to be the local agents. Mr. McCurdy stated that the stock had been placed with both vessel owners and shippers, and this fact would bring everyone into closer touch with the actual situation in the handling of insurance matters. It is not the intention to cut rates, but, having personally interested the big owners in the company, it is believed that the company is assured a good business in the start.

Now let masters and mates go around a block or two, or half a dozen and kick themselves until the lavey or grey matter oozes out of their —well, soles of their boots. Here we have fellows from the beach patenting a metallic oar that is going to carry all before it, there's millions in the manufacture and an unlimited market. Yale and Harvard, Oxford and Cambridge will vie with the Sandwich Islanders in using the metallic oars, sweeps and paddles. Hundreds of brainy and supposedly talented skulls have been hibernating all winter, and lo, for many winters past, in this as well as at other ports, but the thought of making an everlasting scull never entered their heads. Realize that in a fashionable watering place there are a thousand boats from a dinghey to an eight-oared gig, all to be equipped at the thousand and one places in this and other countries. The new oar will also be a boon to the poor fisher folks who use 37 foot sweeps to light along their craft in a calm. The invention is as good as a gold mine in point of returns, worthy of the highest honors that the government and its departments, from the navy to the life-saving service can bestow on it. And it is the acme of economy as well as safety.

CHICAGO.

Special Correspondence to The Marine Record.

Rates here this week are 2½ cents on corn storage and spring delivery at Buffalo.

Capt. J. E. Bassey, formerly of Detroit, is laid up in hospital here with a stroke of paralysis.

On account of the strike talk and withdrawal of boats from the freight market, shipments of grain are being forwarded east by rail instead of wintering in boats or elevators. There is about the same quantity of grain in stock as last year at this time.

There has been greater difficulty with ice on Lake Michigan during the past week than ever before. The Naomi of the Crosby Line took eight days to fetch to Milwaukee from Grand Haven, and the Nyack bound the other way was similarly captured in the ice. The five ice bound F. & P. M. boats off Ludington for several days gives an indication of what winter navigation means on Lake Michigan. Of course these boats are not ice crushers, but they have good power and are always skilfully handled.

The big bascule eight-track bridge crossing the drainage canal at Campbell avenue, Chicago, which has been in course of construction for the past two years, is now complete, and will be thrown open for regular traffic in a few days. The structure is the largest movable bridge in the world and in its construction many difficult problems were encountered, as the bridge, carrying the tracks of the Pittsburgh, Cincinnati, Chicago & St. Louis R. R., the Chicago Terminal Transfer Co. and the Chicago Junction R'y, crosses the canal at a rather acute angle. The cost of construction was \$720,000.

The steamers America and A. B. Taylor will not run on the Michigan City route this summer. The former has been chartered by the International Navigation Co., New York, to run between Buffalo and Slater's Point, on the Niagara river, and the Taylor is for sale. Mr. E. C. Dunbar, of Grand Haven, owner of the boats, may pick up the trade again in 1902, and possibly the Graham & Morton line will look out for the Michigan City traffic this season. The America was chartered for quite a large figure and is to be placed in the hands of her charterers at Buffalo, May 1. She is now in winter quarters at Grand Haven.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record.

Wherever it comes from, the report now is that \$2.25 will be paid on lumber to Lake Erie ports as an opening figure.

This is to be a very busy season up here, new docks, wharves, elevators, saw mills with the industries that they bring in their train are all to be in full blast. While Michigan and Wisconsin are haggling about vessel taxes we have them registered and enrolled in this district without any flummery.

When labor delegations meet fair-minded employers there is seldom trouble at arriving at an amicable understanding. The lumber handling meeting at Ashland, a couple of weeks ago, proved that, and the men are tickled at accepting practically the shippers' terms. Other ports are now trying to follow in the wake of that clean-cut agreement. There seems to be a certain advantage in employers offering the first terms and then modifying their requests where advisable. As a matter of fact, labor delegations crave for recognition; that being offered, terms go easy. The lake engineers' society wants to be recognized, now then, George Uhler might not feel so bad about Capt. James Corrigan. If Uhler smashed the Lake Carriers' Association, there would be another organization of vessel owners and transportation interests established in short order. All have a right to amalgamate.

Sales of lumber still continue and this month will go on record as witnessing the largest individual purchases ever known in this territory. Already a whole season's output has been disposed of, and there is no sign of a let up yet. The estimated total sales of the Duluth-Ashland district are 100,000,000 feet in the past few weeks. G. Fred Stevens, the new surveyor of logs for the Duluth district, has recently issued a circular letter, in which he states that there are about 165,000,000 feet of lumber on the Duluth-Superior docks, of which 123,000,000 feet was unsold, and that now not to exceed 40,000,000 feet is unsold and available to this market. If the amount to be cut during the coming season, which is already sold, is added to this, the total sales since Dec. 20 are about 125,000,000 feet. Chicago has cut a wide swath in the sales, at the same time Cleveland and Buffalo consignees have by no means been slow in their lumber transactions at the head of the lakes.

About the biggest thing going outside of the United States Steel and Iron Corporation is the project to drain the watershed of 2,500 square miles now flowing into Hudson's Bay and land 100,000 horse-power electrical energy every twenty-four hours at Duluth and Superior. The Highland Canal and Power Co., with New York capital, proposes to sell power delivered at consumers' meters on a sliding scale, similar to that of the Niagara concerns, but the prices about 33 per cent. less. The canal will also serve as a thoroughfare for logs, cordwood, pulpwood, and other forest products of which millions of dollars worth stand along its proposed line, and cannot be reached, except by railroads yet to be built. Such is the nature of the country traversed, the value of the lands talked of for waterway and storage reservoirs, and the character of the ground worked in, that the cost of this entire system will be little more than the mere cost of the tail race of the Cataract Construction Co., that generates 55,000 horse-power, at Niagara Falls.

One of the dailies said this week: While the marine engineers' strike has no direct effect in Superior, yet the local members of the Marine Engineers' Beneficial Association have passed resolutions of sympathy for their brothers in the east. The local marine engineers are not the only ones, however, that sympathize with those in the east, for there are vesselmen in this city that believe the strikers have a grievance and who think that some attention should be paid to their requests. Said one prominent vesselman to-day: "I believe the marine engineers have reason to complain in many cases, and the situation might be stated like this: Formerly boats were fitted out with one engine that furnished the power for propulsion and did the hoisting. The lighting was then done by lamps. Nowadays the big boats are fitted out with several engines, besides a complete electric light plant, and the engineers are asked to take care of all without any extra help allowed. It is no wonder that the men are kicking for more help. I believe that the matter will be satisfactorily adjusted, however, before the opening of navigation."

THE steamers J. C. Gilchrist and Marquette are lying helpless in an ice jam in the Maumee river. They are being pushed closer to the Wheeling & Lake Erie bridge as the ice breaks up and it is feared that serious results would follow a sudden releasing of the jam which carried the boats away from their docks. The Gilchrist is the property of J. C. Gilchrist, of Cleveland. She was built in 1887 and is 1,827 gross tons burden. The Marquette is owned by J. W. Moore, of Cleveland. She was built in 1881 and measures 1,343 gross tons.

CAPT. HODGESON, keeper of the Fort Point life-saving station, notified Maj. Blakely, superintendent of the life-saving service, that Mark Ellington, surfman on duty on the lookout tower the morning the City of Rio de Janeiro was lost, had confessed to him that he had heard the Rio's signals of distress, but paid no attention to them and neglected to arouse the station. Capt. Hodgeson immediately suspended Ellington from duty. Ellington denies emphatically that he had made the confession. The matter will be investigated by the proper authorities.

CLEVELAND.

Special Correspondence to The Marine Record.

It is claimed that quite a number of lake engineers that are outside of the association, are applying for berths at vessel owners' offices. So far none have been engaged.

Capt. George Y. Dayton has passed the civil service examination as master of a light-ship in the Light House Department. His general average stood 92.6 and he is ninth in order on the eligible list for appointment.

The stockholders of the Moore fleet held a meeting on Saturday to reorganize the company. The finances have been put in shape and a complete reorganization will be effected at once. Nothing more definite was accomplished.

Longshoremen of almost every description are here in convention this week. The delegates are to formulate demands to be submitted to dock, grain elevator and vessel owners. There is a disposition evinced to maintain last season's rate of pay, or perhaps an advance.

Mr. J. C. Gilchrist, who has been busy all winter buying vessels, has decided to take a rest. He has gone to Hot Springs, where he will spend several weeks. Mr. Gilchrist said that he did not think that there would be anything done in freights this month and that he will be back in time to get all the business he wants.

Cleveland parties were granted a charter in Charleston, W. Va., last week by Secretary of State Dawson for a company to be known as the Central Agency, with a capital stock of \$25,000. The company will do a general brokerage and commission business, dealing in and operating steamboats, barges, docks and warehouses, besides handling agent and factory transportation of all kinds. The principal offices will be in Cleveland and Chicago. The nominal incorporators are young lawyers in the office of Hoyt, Dustin & Kelley.

The labor union delegates in session here this week ought to avoid any arbitrary action or there is no doubt but that their work will be slipping away from them. As regards discharging iron ore the new machinery put in at Conneaut practically does away with nearly all labor, and just as sure as the large syndicates begin to meet trouble with labor, so sure will orders be placed for the construction of similar hoists and ten ton grab buckets at other ports, and the same system applies to discharging coal.

The Cleveland City Forge & Iron Co., Cleveland, is forging what it believes to be the largest set of bending rolls ever produced. They are being made for Wickes Bros., East Saginaw, Mich., and are for the plant of a new eastern ship-building company not yet organized. The company is also building a forged rudder frame for the Union Iron Works, San Francisco, for the battleship Ohio. The weight of the frame is 16 tons. Business in general is increasing, but prices for finished product are not satisfactory.

Mr. Herman, general passenger agent of the Cleveland & Buffalo Transit Co., is out with his tariff for the season from April 15th to December 1. The rate of \$2.50 one way and \$4.50 for the round trip, good for 30 days is the regular fare with berths additional from 75 cents up. During July and August, on account of the Pan-American Exposition at Buffalo, the company will run special daily trips at a flat rate of \$1.50 each day but good only for the day boat, the stop-over privilege of thirty days being eliminated. The C. & B. Line look for an enormous traffic this season, they are getting fully prepared to take care of all that comes their way and the business ability as well as the well known hustling propensities of Mr. Herman will be kept on edge to look after the multitude of patrons of this favorite line.

Let's see, how many fireboats has Toledo got? none, now the lower portion of the city is inundated and the river choked with floating ice, vessels have been torn away from their moorings and there is ructions all along the waterfront. Capt. John Craig pointed out this situation to the city council time and again but the port was too stingy to make an appropriation for a fireboat and ice crusher or to pay tugs to do the work. It is safe to say that the actual damage done amounted to as much as would have built a firetug, and the Lake Shore bridge is being held with cables. An ice crusher will now likely be built but it will be paid for in increased premiums to insurance companies, this is a good way to buy a thing and not know it. Through care and watchfulness this port just escaped a flooding but a fireboat and tugs were at work.

BUFFALO.

Special Correspondence to the Marine Record.

The opening lumber rate is quoted at \$2.25 per M feet from Ashland to Lake Erie ports, but it is not learned that any chartering has been done here at that figure.

The federation scheme for lake employes is all off temporarily. It seems that such ideas are rampant just now, besides, it is questionable if the combination was started on a right basis or at the proper time, certainly not as regards the latter.

John J. Boland, vessel agent, has bought a controlling interest in the lumber barge L. W. Drake. She will be sailed by Capt. Keenan, who owns the other third. She will be towed as before with the barge J. C. King, by the steamer Garden City.

The Buffalo fueling interests will no doubt take up the price of fuel to steamers at this week's meeting. It is expected that the price of last year, \$2.80, will be continued,

though a slight drop may be made. The conditions are about as last season, unless it turns out that rates of freight are lower.

The boilermakers who recently quit work, out of sympathy with the marine engineers, who are out on a strike, returned to work. The boilermakers and marine engineers decided that a great hardship was being worked on the contract boiler shops. In fact it was more of a blow to the boiler shops than it was to the Lake Carriers' Association, which the marine engineers are fighting. So the boilermakers were told to go to work again. As the Buffalo men went out first and requested other ports to quit, it is supposed that they will all go back again on this later ruling.

People here had no use for the recent diversion known for a brief space as the Shipmasters' Protective Association. There is no wonder expressed on account of its falling to pieces, although it was a bold and bad attempt, and might have prospered on a mushroom growth for quite a little while. Of course there are sore heads among the masters, as in any other class, and some with a show of reason on their side, while it is all the other way with the more radical, of which Cleveland and Milwaukee seemed to have a fair sprinkling. The line managers here are usually gentlemen, masters and engineers are treated right, so that there is no cause for a general complaint except as Mr. Uhler views it.

Appointments of masters for the boats composing the Western Transit Co.'s fleet have been made as follows: Arabia, H. L. Dennis; Auburn, Edward Roberts; Boston, John Davis; Buffalo, Robert Murray; Commodore, Thomas Slatery; Chicago, H. Murphy; Hudson, A. J. McDonald; Mohawk, S. R. Jones; Milwaukee, M. Falan; Montana, F. J. Johnson; Syracuse, John Fisher; Troy, Donald Gillies; Vanderbilt, F. T. Osborn. Nearly all the work of repairs on the Western Transit Co.'s boats have been completed. The alterations required were begun immediately after the close of navigation, and have been rapidly pushed forward, so that nothing might interfere with the fitting out of vessels on the approach of the opening of navigation.

PORT HURON.

Special Correspondence to The Marine Record.

Work has begun on fitting out the United Empire and Monarch for this season.

The engines for the new steamer duplicate of the Capt. Thomas Wilson, have been commenced.

The boilers for the new steamer being built by the Jenks Ship Building Co., are nearly completed.

Capt. George Levis will command the steamer Atlantis the coming season. The boat will be engaged in the wood trade.

According to the report filed with probate judge the late Thomas Currie left personal property to the amount of \$6,000.

The late Capt. Moffat left an estate valued at \$60,000. His property on Huron avenue will be divided among his children. The wife gets the personal property and homestead.

It is the intention of the Wisconsin & Michigan Railway Co., to be running the tug S. M. Fisher and car barges 1 and 2 between South Chicago and Peshtigo as soon as the ice breaks up in Green Bay.

Capt. Robertson, of Sarnia, who has been a very popular captain on the Empire and Monarch steamers of the North Western Transportation Co., has resigned his position. The captain has served the company for 20 years.

Capt. Slyfield commenting upon the death of Eber B. McQueen at Marine City, on Wednesday night, said: "During the past six months quite a number of middle-aged shipmasters have died. The old men seem to hang on forever."

The Ann Arbor railway gives out the information that the first trip of the car ferries will be made to Menominee on April 1, if possible. An attempt will be made to force a passage at this time if the icefields show any signs of decay.

Sarnia people are considerably wrought up over the reported sale of the boats of the Northwest Transportation Co., to the Clergue syndicate, of Sault Ste. Marie. James Scott, president of the Northern Navigation Co., when spoken to on the subject, said that his information was to the effect that the Clergue Co., proposed establishing lines to compete with the Northern Navigation Co., between Collingwood, Midland, Parry Sound and Sault Ste. Marie. This action would side-track Sarnia. The report of the sale of the boats is today positively denied by vice-president Long.

The steamer White Star took fire and was scuttled at the foot of Court street, on Thursday, and it is quite probable that she will not be rebuilt. She is owned by Capt. A. B. & L. L. Slyfield, of this port and valued at \$12,000 with an insurance of \$5,000. The origin of the fire is not known, only, that it started aft. The steamer was undergoing a thorough overhauling, and repairs ready for a brisk season's work. The Slyfields are not so to say very wealthy people and the loss is a serious one to them, as many seasons' earnings were put into the White Star. She had a couple of scorchings before, one, rather heavy when she lay at Toledo. While playing on the fire an engineer ran over several lengths of hose cutting them in two, and according to instructions from Capt. Slyfield the vessel was at once scuttled.

FLOTSAM JETSAM AND LAGAN.

A new writer of sea stories will appear in the April Scribner's. He is a Boston man, James B. Connolly, who has found rich material among the Gloucester fishermen, and he has the knack of writing exciting tales.

The Hart line steamer Petoskey has been sold to G. P. Cory, formerly agent of the Graham & Morton Line in Chicago. Cory left the Graham & Morton Co. Feb. 1 and is said to be preparing to run an independent line between South Haven and Chicago.

Petitions have been presented in both Houses of Parliament, at Ottawa, for the incorporation of the St. Mary's River Bridge Co., with headquarters at Toronto, and a capital of \$500,000. The proposed incorporators are Toronto men. They seek authority to build a bridge between the two "Soos."

Joseph Bartley, shipkeeper on the barge Marine City, lying near the West Bay City shipyard, was burned to death in the cabin of the boat Tuesday morning, together with his dog. He had started a fire in the stove, when the cabin caught fire, and he could not escape. He was 45 years of age. He lived in West Bay City, and leaves four children.

The company operating the Escanaba & Lake Superior Railroad, a line eighty-five miles long, which connects Escanaba with the Chicago, Milwaukee & St. Paul Railroad, has under consideration the project of constructing two car ferries of twenty-six cars' capacity each, to run between Escanaba and St. Joseph, Mich., the year round. The project is as yet in embryo.

It was at the Jibboom Club on ladies' day. An old whaleman's daughter asked Capt. Hen what he thought of the ocean that was displayed on one of the marine paintings on the wall. "Dunno," said Capt. Hen, craftily, "what do you think of it?" "Oh, I think the water looks too calm," replied the maiden. "Well," quickly replied Capt. Hen, "you know its the oil on it that does that." Then Captain Hen showed her the club's biggest spyglass.—The Day, New London, Conn.

I ran a cross quite a story in a Sunday edition of the Detroit Free Press a little while ago. A sailor, handcuffed, being brought before the officer in charge, immediately dived into his pocket and fetched out a document that proved he was an innocent party, pretty elastic sort of handcuffs though. This reminds me of the castaway fishermen sitting in the cleft of an iceberg and dying of thirst. It can be said though that this was a salt water berg and the story was vouched for by a marine hospital surgeon, it was also told to the public.

Two summers will now pass before any new government work to amount to anything will be done on the lakes. The summer of 1901 is now lost. A new river and harbor bill will likely be introduced in Congress in December 1901, and may be passed and signed by July 1, 1902. Should that be the case but little work could be done that summer, as thirty days must be lost in advertising for contracts, and still more time be lost with other formalities. So at the best under those circumstances the most which could be accomplished would be to let contracts and have everything ready to commence work at the opening of the spring of 1903.

L. Boyer's Sons will move from their present quarters at 90 Wall St., where they have been for twenty years, to the Boyer Bldg., 90 Water St., between Wall St. and Old Slip, on or before April 1st, as their old offices are to be torn down. By a singular coincidence the new office bears the same number as the one they have been in a score of years. The entire building at 90 Water St. will be occupied by the firm, but Charles H. Boyer, the senior member of the firm, who is also secretary of the National Board of Steam Navigation, says he will reserve the fifth floor of his new building for the use of the Executive Committee of the N. B. S. N., as the old quarters at 90 Wall St. have long been considered too small for the important personages who compose the committee.

Thoroughly tested high grade steel now enters into the construction of lake freight (cargo) steamers. Length, 500 feet; capacity, 8,000 tons; engines, triple and quadruple expansion; boilers, tubulous taking the lead; water bottoms, six feet from shell plates to tank tops; steel decks and pole spars, equipment, every modern appliance known for the handling of ship and cargo, including flexible steel wire towing, mooring and hauling lines, electric light installation steam automatic towing machines, capstans, deck winches, etc., etc. *The decks being clear fore and aft it was thought that a bicycle rack at each end would furnish a prompt and easy means of locomotion. The practice, however, seems to have become ancient and narrow movable gangways or platforms after the manner of a horizontal lift, traveling well off to the side, forward to port and aft to starboard at a rate not to exceed nine-tenths of a mile per minute is now being considered. These narrow, moving side walks or pedestrian despisers are designed especially for transporting members of the crew as well as ship's gear, that is, anything from an oil can to a coil of rope or a needle (not a compass needle) to an anchor, if desired. The proviso being made regarding the compass needle because it seldom anchors and there is nothing allowed to be seldom around these juvenile Great Easterns. As the deck hands are expected to be at either end of the craft, without fatigue, almost simultaneously, two-thirds less in number may be carried so that the conveyor can earn its first cost and up-keep each trip. This is only a spark of the twentieth century advancement to be witnessed on the lakes, a close search would find scores of furnaces in full operation.

P. S. All above the star has been censored and the rest censored.

WESTERN ASSURANCE CO. TORONTO.

LAKE, ST. LAWRENCE AND ATLANTIC INSURANCE.

The Western Assurance Co., Toronto, held its 50th annual meeting at the company's offices in Toronto, on Thursday last.

The first part of the report treated upon fire insurance, in which the Western Assurance Co. does a large local business. The report of marine business accompanied by an inclusive financial statement, was furnished by the directors up to the 31st December last.

Two half-yearly dividends at the rate of 10 and 8 per cent. per annum respectively have been declared.

As announced by circular to shareholders in July last, it was decided to increase the cash capital of the company to \$2,000,000 by calling up the \$1,000,000 subscribed and unpaid capital in installments of 10 per cent. each, at intervals of two months. Two installments fell due before the close of the year, but the majority of shareholders exercised the option which was given of anticipating the calls, and nearly two-thirds of the entire amount was paid in by 31st December.

The directors have pleasure in calling attention to the financial position which the company occupies at the beginning of the second half century of its corporate existence—offering, as it does, the following security to its policyholders:

Capital paid up on 31st December.....	\$1,648,518 00
Calls in course of payment.....	351,482 00
Total capital.....	\$2,000,000 00
Reserve fund.....	1,002,794 00
Total funds.....	\$3,002,794 00
Toronto, 1st March 1901.	

SUMMARY OF FINANCIAL STATEMENT.

The account for the year showed the following business transacted:

Fire and marine premiums.....	\$2,918,786 85
Interest.....	75,649 60
	\$2,994,436 45
Fire and marine losses.....	\$2,069,097 37
General Expenses.....	912,514 15
	\$2,981,611 52
Balance.....	\$ 12,824 93
Dividends to shareholders.....	110,411 35

The president, in moving the adoption of the report, said:

* * * * *

The transactions in the marine branch during the past year call for something more than passing comment. There has been a very considerable increase in the volume of premiums, and the losses, I am pleased to say, have been moderate; so that there has been a fair profit in this department—which, as you may remember, showed for some years prior to 1899 unsatisfactory results. The growth in premiums came largely from the increased amount of inland business transacted. The losses on the Great Lakes were considerably below the average of several preceding years, and companies engaged in this branch of underwriting are able to show a good margin of profit on the season's transactions.

Here I may remark upon a distinguishing feature of marine business—especially such as ours—namely, the large proportion of the liability which, owing to the close of lake navigation runs off, and the premiums on which are completely earned, before the 31st December in each year. It is incumbent upon every soundly-managed company to reserve an amount to provide for running off—or reinsuring—the liabilities under its current policies. General experience has proved that in fire insurance business one-third of the annual premium income is an ample provision for this purpose. It will therefore be a satisfaction to you to know that, after deducting that portion of our marine business upon which no liability remains at the end of the year—which I may say represent more than one-fifth of our total income—the amount of our reserve to provide for this contingent liability upon risks outstanding on the 31st of December is considerably in excess of the standard I have named.

In relation to our ocean business—or, more particularly, to that portion of it pertaining to risks via the River St. Lawrence—I may perhaps be permitted to say a few words which may not be considered as coming within the usual scope of a president's remarks on a motion for the adoption of an annual report. But as you have doubtless, through the columns of the press and through other channels, heard a good deal that has been said upon one side of the question, and as nothing, so far as I am aware, has been publicly said upon the other side, I feel justified in making a departure

from what has been the custom at our shareholders' meetings, and dealing briefly with a matter which, while it does not directly bear upon the balance sheet before you, is nevertheless so closely identified with questions with which we are called upon to deal, that it may not be deemed "out of order" on an occasion of this kind.

In connection with our somewhat limited transactions in ocean risks via the St. Lawrence route, we have to bear our share of the rather harsh criticisms that during the past year have fallen to the lot of the few companies which—having continued through a series of unprofitable years to transact this business—at length determined, at the opening of navigation in 1899, to secure such rates as the exceptional perils of this route—proved by its unfortunate record of losses—seemed to demand, or else to follow the example of the numerous companies that have withdrawn altogether from that field of marine underwriting.

We have been charged with discriminating against a Canadian route, and with doing an injustice to the port of Montreal. The Board of Trade of that city has asked the Government to appoint a commission to inquire into the matter. The Montreal Marine Underwriters' Association, on the other hand, feeling that any unjust discriminations from which the trade of that port might be suffering, would be found to exist in other quarters than in the marine insurance offices, have asked that the inquiry be made to include railroad charges, steamship freight and other matters pertaining to the cost of transportation. I am sure that I express the feelings of the marine underwriters when I say that they would welcome an investigation conducted on these broader lines, and that they are prepared to submit evidence from the records of past year that would more than warrant the advances that have been made in cargo rates from Montreal.

No action upon this suggestion—which was made several months ago—has as yet been taken; but I observe that a movement has recently been inaugurated by gentlemen largely interested in keeping down the rates charged upon shipments by the route in question, having for its object the formation of a new company to transact this business at reduced rates. While the feelings which might inspire an investment in such an enterprise would doubtless be commendable from a patriotic point of view, I question whether, if the subject is duly inquired into, it will ever be seriously considered as a business proposition.

But whatever may be the outcome of this or other movements to secure the desired end, those who have been unfortunate enough to share in the experience of this business in former years, must remain firm in the conviction that in its present condition the St. Lawrence route presents much greater risks than a route from a direct ocean port, and that companies assuming these risks must charge a much higher rate of premium, particularly in certain seasons of the year, than is charged from ports on the Atlantic. This is not simply a matter of opinion. It is demonstrated by statistics embracing the total shipments by this route during a period of years—which show that from 1889 to the close of the season of 1899 the losses incurred were very largely in excess of the premiums collected, and that at least seventy-five per cent. of the claims arose from accidents in the river and gulf. Within the period named twenty-eight ocean steamers have been totally lost and eighty-four strandings are recorded—at least fifty of these latter having occurred between Montreal and Quebec.

With these unpalatable fact before us, which it can serve no good purpose to attempt to conceal, our efforts as Canadians desirous of fostering trade by a Canadian route and advancing the interests of our chief Canadian port, should be in the direction of securing the most liberal assistance from the Government, to reduce by every possible means the perils of St. Lawrence navigation, rather than in attempting to obtain insurance below its legitimate cost. This latter remedy could at best afford but temporary relief, while the reduction of risk by the erection of additional light-houses, the improvement of the channels, and by every other means which experts in navigation could suggest would, by diminishing the losses, result—as the natural consequence of competition for what under such improved conditions would become a desirable class of business—in materially diminishing the discrepancy now existing between Montreal rates and those charged from the principal ports on the Atlantic.

I feel in making this statement of the views we entertain that I am doing but simple justice to the officers and agents of this company—which, in the face of adverse experience, has maintained its marine agency in Montreal for upwards

of a quarter of a century, and which we feel it should only continue while rates are obtainable that offer some prospect of a profitable out-turn.

In conclusion, I would say that the directors desire to express their appreciation of the services of the officers and the branch managers and agents of the company throughout its extended field of operations, realizing as we do that to many of them such a year as we have just passed through has been a particularly trying one. They also wish to place on record their obligation to the Earl of Aberdeen, Sir John Kenna-way and Mr. James Stevenson, the members of the Advisory Board of our London branch, for the valued advice and assistance they have rendered in advancing that branch to its present satisfactory position.

The vice-president seconded the adoption of the report, which was carried unanimously. The election of directors for the ensuing year was then proceeded with, resulting in the unanimous re-election of the following gentlemen, viz.: Hon. Geo. A. Cox, Hon. S. C. Wood, Messrs. Robert Beaty, G. R. R. Cockburn, Geo. McMurrich, H. N. Baird, W. R. Brock, J. K. Osborne, and J. J. Kenny.

At a meeting of the Board of Directors, held subsequently, Hon. Geo. A. Cox was re-elected president, and Mr. J. J. Kenny vice-president for the ensuing year.

BRITISH MERCANTILE MARINE.

The Liverpool Journal of Commerce of recent date says: "The annual reappearance of the statistics showing our aggregate naval expenditure side by side with the aggregate tonnage of our mercantile marine, as well as the value of our imports and exports by sea, serves to point out to us that year by year we are paying more for national sea insurance. Our premiums, compared with the amount at risk, continue to bear very favorable comparison with those paid by other nations:

MERCANTILE MARINE AND FOREIGN TRADE.

Country.	Mercantile Marine Tons.	Clearances in Foreign and Coasting Trade Tons.	Seaborne Exports and Imports £
British Empire....	9,707,668	174,731,889	1,300,339,370
Russia.....	554,141	28,280,184	84,430,000
Germany.....	1,639,552	17,812,760	540,082,000
Holland.....	302,224	9,375,535	15,008,000
France.....	957,766	30,446,289	328,768,000
Portugal.....	129,522	10,279,489	16,808,000
Spain.....	657,924	24,315,215	63,662,000
Italy.....	815,162	30,162,879	72,305,000
Austria-Hungary	224,578	14,325,185	24,179,000
United States....	848,246	22,177,483	405,468,000
Japan.....	648,324	3,770,346	61,887,000

(a) Russia in Europe and Caucasia. (b) Total trade. (c) Metric tons. (d) Exclusive of lake tonnage.

"Thus it is seen that we retain no less than 58 per cent. of the total marine of the eleven leading maritime nations of the world, our clearances amounting to 47 per cent and the value of the goods handled to 44 per cent."

RIDDLES IN IRON AND STEEL.

In view of our apparently extensive knowledge of the nature of iron and steel, it may seem strange to still speak about riddles wrought in these metals. Nevertheless, in everyday practice, we are constantly confronted by riddles of one kind or another, when dealing with iron and steel, particularly the latter.

Why is it that we can raise the strength of soft staybolt iron of, say 47,000 pounds per square inch, to 60,000 pounds per square inch either by heat treatment, or by repeated application of stress? Why is steel coming from the rolls or hammer weaker and less ductile than the same steel is after left lying a day or two, or, better still, a week?

There is no doubt that many tons of suitable material have been either thrown out by the mill people themselves or were rejected by the inspectors because it failed to meet specifications, causing needless vexation and friction, simply because neither the one nor the other of the parties knew that steel is in a disturbed physical state after rolling or hammering, no matter how good the material, and should be left to rest, the longer the better. Now, what takes place in the steel during the period of rest?

Another riddle is that we can raise the elastic limit and ultimate strength by a successive application of stress very much above the original strength. What law, if it is a law, governs this phenomenon? We are all familiar with the discovery of cast iron getting stronger by tumbling in a tumbling barrel, but for all we know it is still an unsolved riddle what the conditions really are producing such effects. —Cassier's Magazine.

TREASURY DECISIONS RELATING TO VESSELS.

AUTOMOBILES PROPELLED BY GASOLINE OR OTHER PRODUCTS OF PETROLEUM.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
WASHINGTON, D. C., March 5, 1901.

To United States supervising and local inspectors of steam vessels, and others whom it may concern:

You are hereby notified of an amendment to section 4472, Revised Statutes, permitting, on conditions named therein, the transportation, on steam vessels, of automobiles using gasoline or other products of petroleum.

Attached hereto is a copy of section 4472, Revised Statutes, as amended.

JAS. A. DUMONT,

Supervising Inspector-General.

Approved: L. J. GAGE, Secretary of the Treasury.

Following is the text of the act approved February 20, 1901: An Act to amend section forty-four hundred and seventy-two of the Revised Statutes so as to permit the transportation by steam vessels of gasoline and other products of petroleum when carried by motor vehicles (commonly known as automobiles) when used as a source of motive power.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section forty-four hundred and seventy-two of the Revised Statutes be amended by adding thereto at the end of said section the following:

"Nothing in the foregoing or following sections of this Act shall prohibit the transportation by steam vessels of gasoline or any of the products of petroleum when carried by motor vehicles (commonly known as automobiles) using the same as source of motive power: Provided, however, That all fire, if any, in such vehicles or automobiles be extinguished before entering the said vessel, and that the same be not relighted until after said vehicle shall have left the same: Provided, further, That any owner, master, agent, or other person having charge of passenger steam vessels shall have the right to refuse to transport automobile vehicles the tanks of which contain gasoline, naphtha, or other dangerous burning fluids."

AMENDING SECTION 4427, REVISED STATUTES, RELATING TO TOWING, OYSTER AND FISHING VESSELS CARRYING PERSONS OTHER THAN THE CREW.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR-GENERAL,
WASHINGTON, D. C., March 5, 1901.

To supervising inspectors of steamboats:

The attention of supervising inspectors is hereby called to an amendment to act approved July 9, 1886, amending section 4427, Revised Statutes, entitled an act relating to licensing of vessels engaged in towing to carry persons in addition to their crews.

The amendment to said act being intended to include "steam vessels engaged in oyster dredging and planting, and fishing steamers engaged in food fishing on the Great Lakes and all other inland waters of the United States" to the privileges granted in the original act to steamers only engaged in the towing business.

Supervising inspectors of steam vessels granting licenses to the class of vessels named in the act are expected to exercise a wise but liberal discretion in the issue of such licenses in determining the number of persons that may be carried in addition to the crew, that may reasonably be required to carry on the legitimate business of the steamers entitled thereto, and no more.

JAS. A. DUMONT,

Supervising Inspector-General.

Approved: L. J. GAGE, Secretary of the Treasury.

The following is the text of the act of July 9, 1886, as amended:

An act to amend section forty-four hundred and twenty-seven, title fifty-two, of the Revised Statutes, relating to inspectors of hulls and boilers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the amendment to section forty-four hundred and twenty-seven, approved July ninth, eighteen hundred and eighty-six, entitled "An Act relating to the licensing of vessels engaged in towing to carry persons in addition to their crews," be amended to read as follows:

"That any steam vessel engaged in the business of towing vessels, rafts, or water craft of any kind, also steam vessels engaged in oyster dredging and planting, and fishing steamers engaged in food fishing on the Great Lakes and all other inland waters of the United States, and not carrying passengers, may be authorized and licensed by the supervising inspector of the district in which said steamer shall be employed to

carry on board such number of persons, in addition to its crew, as the supervising inspector, in his judgment, shall deem necessary to carry on the legitimate business of such towing, oyster and fishing steamers, not exceeding, however, one person to every net ton of measurement of said steamer. Provided, however, that the person so allowed to be carried shall not be carried for hire.

"Sec. 2. That every steam vessel licensed under the foregoing section shall carry and have on board, in accessible places, one life preserver for every person allowed to be carried, in addition to those provided for the crew of such vessel."

Approved, February 23, 1901.

For terse, clear and well framed enactments commend us to the Steamboat Inspection Service—nit.

In the first line of the first act quoted herewith, "nothing shall prohibit" the carriage of an automobile, while in the last provision almost any person may have the right to refuse to transport automobile vehicles.

The second decision and amendment seems equally as dense as the former one, nor could we understand what Senator McMillan meant when he favored the amendment, after slightly changing the wording in the Senate, nor do we believe that any of his hearers did. Here we have steamers not carrying passengers, authorized and licensed by the supervising inspector of the district to carry passengers, as anyone outside of the crew is either a passenger or stowaway, then again, these additional persons are to carry on the legitimate business of the boats, not to be carried for hire, but to be provided with life preservers. Such language would surely puzzle even a Philadelphia lawyer, it bangs Brannigan, and Brannigan banged the devil.

A FRENCH VIEW OF GERMANY'S MERCHANT MARINE.

The Paris Temps published recently an article written by M. Lockroy, former Minister of Marine, on the subject of Germany's mercantile marine development. M. Lockroy declares that Germany bids fair to surpass England, owing to the energy the former nation has displayed in improving its harbors, the natural and artificial advantages possessed by the country and the Government's fostering care. M. Lockroy predicts that Germany will become the greatest shipbuilding country in the world. In support of his argument M. Lockroy quotes the recommendation of the American naval attaché to the Washington Government that hereafter naval officers and naval constructors should be sent to Germany on voyages of instruction instead of the schools of England and France, as has been the custom heretofore.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo.....	2,910,000	.....	.....	39,000	641,000
" afloat.....	1,014,000	.....	.....	.....	.....
Chicago.....	11,293,000	4,449,000	3,197,000	542,000	253,000
" afloat.....	57,000	2,506,000	1,344,000	1,000	.....
Detroit.....	429,000	502,000	1,000	29,000	25,000
Duluth.....	7,721,000	4,267,000	1,017,000	310,000	75,000
Fort William, Ont..	1,521,000	.....	.....	.....	.....
Milwaukee.....	1,047,000	665,000	777,000	1,000	27,000
" afloat.....	.....	128,000	322,000	.....	72,000
Montreal.....	100,000	15,000	189,000	9,000	34,000
Port Arthur, Ont....	250,000	.....	.....	.....	.....
Toledo.....	578,000	1,900,000	305,000	9,000	1,000
Toronto.....	76,000	.....	3,000	.....	10,000
Grand Total.....	55,892,000	21,014,000	10,838,000	1,115,000	1,355,000
Corresponding Date, 1899.....	53,698,000	21,060,000	6,401,000	1,170,000	1,061,000
Increase.....	.....	1,250,000	288,000	.....	.....
Decrease.....	1,342,000	.....	.....	48,000	175,000

While the stock of grain at lake ports only is here given the total shows the figures for the entire country except the Pacific Slope.

THE following large steam yachts, among others, will have new Roberts boilers next season. Steam yacht Admiral owned by Mr. Pliny Fish, of New York; new steam yacht (formerly steamer City of Quincy,) owned by Mr. H. B. Anderson, of New York; steam yacht Say When, owned by Hon. W. J. White, Cleveland, Ohio; new steam yacht now being built on the St. Lawrence river, owned by Mr. W. H. Nichols, president of the General Chemical Co., of New York; three new steam yachts, now being built by the Geo. Lawley & Son Corporation, South Boston, Mass.; steam yacht Venice, owned by L. C. Smith, of Syracuse, N. Y.; steam yacht Chetelah, owned by Mr. A. J. Wise, of New York; new steam yacht (not yet named) owned by Mr. James Averill, of Champlain, N. Y.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Collision—Negligent Navigation—Leaving Wharf in Fog.—The mere fact that a tug left her landing opposite in New Orleans to cross the river with a heavy tow during a fog did not constitute negligence which would render her in fault for a collision, where she observed the rules as to speed and signals, and took all proper precautions. The Ella Andrews, 105 Fed. Rep. (U. S.) 651.

Salvage—Amount of Award—Review.—An award of an Admiralty Court for salvage services in towing a disabled vessel into port, based on the value of the vessel salvaged, and which is many times the value of the towage, on which the award should have been based under the facts shown, is one made upon incorrect principles, and may properly be reviewed, and the amount reduced, by the Circuit Court of Appeals. The New Camelia, 105 Fed. Rep. (U. S.) 637.

Salvage—Character of Services—Vessel in Distress.—Where a steamship in the Gulf of Mexico, 60 miles from the mouth of the Mississippi, was disabled, by the breaking of her shaft, beyond any temporary repairs that could be made, and in need of assistance to reach her port, although not in immediate peril, she was so in distress that aid voluntarily given her by towing her to the mouth of the river constituted salvage services. The Catalina, 105 Fed. Rep. (U. S.) 633.

Steam Vessels—Navigation in Fog.—A tug left her landing opposite New Orleans during a fog to cross the river with a tow laden with coal and a coal palace for loading the coal on a steamship. She observed the proper rules as to speed and signals. Almost immediately afterwards a second tug left an adjoining landing with a lighter tow, intending to take a course following the first tug, but she in fact took one which brought her across the course of the first tug, and came in collision with and sunk the coal boat being towed by the latter. She failed to give the proper signals on leaving the landing, and, on danger of collision becoming imminent, increased her speed, while the first tug stopped and reversed. Held, that the second tug was solely in fault for the collision, regardless of whether her failing to reverse was a fault under the circumstances. The Ella Andrews, 105 Fed. Rep. (U. S.) 651.

Amount of Compensation.—The Catalina, a large Spanish steamship valued at \$200,000, while in the Gulf of Mexico, on her way in ballast from a Mexican port to New Orleans, broke her propeller shaft beyond temporary repair. She attempted to proceed by sail, but was becalmed about sixty miles from the mouth of the river, and during the night signaled the Olympia, a steamship bound outward in ballast, for assistance. By agreement, the Olympia undertook to tow her to the South Pass, the amount of compensation to be determined later. The crew of the Catalina delivered a hawser on board the Olympia, and the towage was performed in safety, the weather being calm and the sea smooth. The Olympia was delayed by the service about twenty-four hours. She was a vessel worth \$75,000. Held, that the service rendered was properly a salvage service, and entitled to be compensated as such, but was not of a high order of merit; that as the service contracted for was merely towage, which was performed without risk to the Olympia or her crew, it should be compensated on the bases of the value of such towage, an equal amount to be added as salvage compensation; and, it appearing that \$50.00 per hour was full compensation for the towage, an award of \$2,400 should be made. The Catalina, 105 Fed. Rep. (U. S.) 633.

Amount of Award—Services of Crew.—The New Camelia, a steamer worth \$35,000, and having on board 150 passengers, broke her shaft when about the middle of Lake Pontchartrain, and was wholly disabled from further navigation. She was anchored, and a boat sent to a port twelve miles distant for a tug. Shortly afterwards a tug was sighted and signaled, and under direction of her owner, who was on board, such tug dropped her tow and proceeded to the steamer. On learning the facts the owner of the tug offered to tow the steamer to a port, which offer was accepted. The service required about two hours, after which the tug went back, and, securing her tow, proceeded on her way. It was in the daytime, and the lake was calm. No compensation was agreed upon, and the owner of the tug made no charge for salvage, but estimated the value of the towage service rendered at from \$15.00 to \$30.00. Subsequently members of the crew of the tug libeled the steamer for salvage services, and the court fixed the value of such services at 5 per cent. of the value of the vessel, amounting to \$1,750, and apportioned one-half to the crew of the tug, which was equal to about three months' wages. Held that, while the services rendered might properly be considered salvage services, they were not of such an order of merit on the part of the crew, who were not volunteers, as to justify the award made them, but that, the vessel not having been in great peril, and the service having been offered and accepted merely as a towage service, and so regarded by the owner of the tug, the total award should not exceed double the value of such service as estimated by him, one-third to be apportioned to the crew. The New Camelia, 105 Fed. Rep. (U. S.) 637.

JAMES P WHITE, master of the yacht Sagamore, writes from Miami, Fla., that he is about to leave that port for Norfolk, Va., to fit out for a cruise on the Great Lakes.



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regarded.

CLEVELAND, O., MARCH 14, 1901.

SENATOR CARTER ripped the smaller appropriations in the recent River and Harbor Bill all to pieces but in doing so he killed many measures of great merit.

FRANCE pays the largest shipping subsidy of any nation, yet we find that she purchased 40,000 tons (39,253) of floating property from the British last year, Germany and Italy 88,650 tons and 81,667 tons respectively.

It is positively true that the most arduous navigation in the world is found in the North American trade, and more markedly so in the Gulf of St. Lawrence. Shipowners, underwriters and sailors are at one on this point.

THE flash in the pan made by the Masters' Protective Association has dwindled out, at the same time, the element of combination was evidenced. Owners should at least keep their direct and personal agents feeling loyal at all times.

AN examination may be taken before the Civil Service Commission for the position of inspector of hulls or boilers. Several of these vacancies now exist, according to the particulars furnished elsewhere in this issue of the RECORD.

SOME one of the many enterprising marine journals might put up a chromo or cash prize for the most lucid explanation of the reason why a drowned man floats face up and a woman face down. For our part, we're satisfied to let it go at that.

SENATOR CARTER, of Montana, will always live in the memory of contractors for government work on the lakes, on account of his denying their expected pabulum through the river and harbor bill. The Mississippi dollar searchers feel fit to go after his scalp, and small wonder.

PERHAPS that U. S. Local Inspector of Hulls at Port Huron would like to act as a crimp for awhile, and shanghai lake engineers. He gives one the impression that because a person has taken a voluntary, competitive examination that the Secretary of the Treasury, and his satellites owns him. Local Inspectors had better keep their hands off, their offices are not shipping offices, just yet.

ANYONE carried legitimately on a vessel should be on the articles, in some shape or form. If caretakers of cattle, the number and names to be duly recorded. If only for use during an emergency, still must there be an authority over them. It has been said that the oysterman in Chesapeake Bay sometimes carried out more waifs of humanity than they brought back. In any case, we think that the Commissioner of Navigation would support our views in the matter.

BOAT DRILL.

The recent loss of life through the sinking of the Pacific Line mail steamer Rio de Janeiro, in comparatively smooth water at the entrance to the harbor of San Francisco, during the prevalence of fog, is deplorable from every standpoint. The old hull itself is probably well out of the way, her cargo, like the vessel, can be replaced; but, no one can call back the valuable lives which she carried with her. Capt. Ward, with a good deal of sailor-like spirit, performed his last act of self-abnegation by sticking to his post and going with the bulk of his passengers, but that availed nothing, nor do we know whether it was for the best or the worst to let her take him along with her in the fashion he did and under the circumstances.

The foregoing is, however, but a prelude to the subject of boat drill and the oft times fatal termination resulting from a sheer disregard of human life. In this particular case, there was a period, variously estimated at from five to fifteen minutes, between the vessel striking and sinking, and, given a specially prepared boat drill, it might no doubt have been demonstrated that every boat carried could have been swung over the side in something less than three minutes from the time the order was given to clear and lower away boats. Capt. Ward, late master of the Rio, knew something different, as well as his principal officers, so also, we surmise, must the inspection officials of passenger steamers, and particularly the local inspectors of the U. S. Steamboat Inspection Service, who last inspected the Rio's boats and other equipment at San Francisco, and, in passing, we can but say, that if these men realize their part of the responsibility for the loss of life in this case, they will undergo many a bad half hour, to say the least. A coroner's inquest was held in due course over some of the recovered bodies, but we have not learned that the local inspectors of steamboats had much to say, if anything, towards assisting the coroner or his jury in arriving at the causes leading up to the drowning of a hundred and a quarter human beings. Why should these steamboat inspectors inform a jury of farmers, or at least land lubbers, that it was quite a chore to get the boats out of the chocks and range them alongside ready for the debarkation of passengers; hence, the coroner's jury were befooled and blinded to the effect, in their mental chasing after the primal cause, which was only too palpable, they ought to have endeavored to learn why the people were lost and not how the bodies were drowned; so that, being hounded on the wrong scent, the jury made no recommendations for the future safety of the lives of passengers, or means to be used having this end in view.

Given such a crew as the Rio had, with the ordinary standing chocks, davits and tackles, and all under precisely similar conditions, it is a question if the smartest officer that ever trod a plank (such being his only alternative) would not sooner go to his stateroom, light his pipe and let her go all standing, than attempt to properly man and place passengers in the boats alongside under a neat half hour, disgraceful as the statement appears, though positively endorsed by the action of Capt. Ward, her late commander, in not having concerned himself about getting the boats in the water.

Now we will point out how the Treasury Department can clear its skirts from choking the luff of so many passengers in the future, the Mohegan and Rio, crowds being the most recent to go to Davy Jones' locker and under similar conditions.

The modus operandi is about as follows: The Secretary of the Treasury, after being so advised by the Supervising Inspector General of the Steamboat Inspection Service, requests the said Inspector General to inform or instruct (either word would do) the several District Supervising Inspectors of Steamboats, to order all local inspectors to take personal charge of the work and lower a boat on each side of a passenger steamer before granting a clearance as per inspection papers, should the steamer be alongside of a dock, then get them over on the clear side, the same side, what ought to be the outside as it were, and as it certainly would be. The time consumed in the work to be accurately noted and faithfully recorded in each and every case. Oh, what a charming revelation of irregularities in inspections would then be developed. Yet, in all due seriousness, this is exactly what is required now and for the next few years. Of course, the innovation would be met with a storm of objections from the local inspectors, whose duty it is to inspect the equipment of steamers, and especially passenger carrying steamers, but there would be no resignations from office.

We speak, or rather write advisedly in advocating a direct

personal supervision when putting boats over the side, this would do away with the prepared drill paraded solely to satisfy the letter of the regulations, and obviate the circus-like performances usually indulged in. Those who are totally ignorant and others with a smattering or only superficial knowledge of the subject, rave and prate about more frequent boat drills, and the consequent efficiency of discipline, where each one knows exactly where to go and what to do when he gets there. If present at one of these parade drills, the novices, also the kid-glove inspector, looking on from another part of the deck, time the operation in swinging the boats out and are amazed as well as satisfied and delighted at the skillful rapidity of the work. This is all right for the hood-winked onlookers, but go behind the scenes and enquire from the shore gang, the bos'n or the officer in charge of the boat, and any of them will tell you, (but no they won't either if they know themselves,) that the boats were all previously lifted just clear of the chocks, that the lashings of the gripes were all neatly passed, but the bights were only stopped with the turn of a rope yarn, that the covers, instead of being regularly laced with marlin, were only held in place with an occasional stop of sail twine, davit guys passed handy for swinging and the tackle falls ready for lowering, with a special guy at hand for the in-board swing of the davits when the boats were again to be settled honestly on the chocks. The be-spectacled, and sometimes pompous, kid-gloved inspector, fobs his chronometer, congratulates the general passenger agent, ship's husband and master, also perhaps a few prominent visitors, and the official drill is happily over, with the consolation that practical tests can be had later, if ever, but men are not paddling around expecting to drop boats in the water at every whipstitch.

The foregoing smacks a little like telling tales out of school, but we hate to see valuable lives imperilled or thrown away on account of old-fashioned, awkward, clumsy gear around boats' davits, when improved equipment should be used. We have also said so much, because it is our duty so to do, and to show the necessity of direct personal supervision by the inspectors, and, finally, do we argue for the best possible equipment for handling boats from a humanitarian standpoint.

RIVER AND HARBOR WORK.

It is quite safe to say that after the talk Senator Carter indulged in on the late River and Harbor Bill, no omnibus arrangement for appropriations will ever again be permitted to even pass through committee, much less be reported out from the House to reach the Senate.

It was rather freely admitted that there was "pork in the bar'l" to appease the cravings of the constituents returning the representatives to Congress, and, it has been ever so—moreover, it always will be the same under the present form of seeking government aid for the conservancy and improvement of rivers and harbors.

It will be generally conceded that a proper degree of paternalism may be equitably wielded by the Federal government—on the other hand, there is no sense in loading down our revered Uncle Samuel with deniable requests, such as carrying before him measures which we know beforehand that in all conscience sake and for our own ultimate welfare he should positively refuse to grant. Such has been the experience of the country in presenting the numberless or numerous unworthy projects before the Senate in the now null and void River and Harbor Bill.

Now, that the entire desired legislation is out of the way, it is in order to inquire why the hopes and expectations of so many thousands of people in a majority of the States of the Union should have been overborne. Putting aside all thoughts of log-rolling, political wire-pulling, or the higher plane of financial diplomacy in the expenditures of the government, we stand face to face with the fact that Senator Carter was the means of denying the petitions of citizens throughout the country, and all that a large number of these people can understand is, that a Montana Senator thwarted their will because there was no provision in the bill for irrigating the arid acres of the illimitable western plains.

The supporters of the river and harbor bill never for a moment thought that we ought to follow the present Egyptian policy of the British, in their projects on the Nile. As the title of the bill implied, it was essentially a marine measure, including the improvement of internal waterways; there was nothing of the irrigating, cultivating, agricultural aspect or intention evinced. Consequently, with every reason on their side, those in charge of the bill refused to

entertain such foreign elements. This feature, however, did not defeat the bill; then what did, and how are we to avoid such a widespread and almost national disappointment in the future?

In so far as we can see into the prevailing methods used for securing an entry on the lists of public improvements, and, while the National Treasury is looked upon as an almoner for all sections of the country, there is only one way out of the situation, and that was partly pointed out by Senator Carter in his fight against the passage of the bill. Hitherto, it has been the custom of the engineer officer, Corps of Engineers, U. S. Army, in charge of the district, to submit his views to the Chief of Engineers for further endorsement before being laid before the Secretary of War. With these particulars at hand, the River and Harbor Committee begin their work and the remainder is Congressional action. Senator Carter in his big long talk of thirteen hours to down the bill, alluded frequently to the engineer officer, his social surroundings, a natural desire to stand well with the community, and his professional pride in carrying out the work of the district, all of which tended to enhance the importance of local expenditures and influenced recommendations to that end. So that no other law-giver or maker at Washington could thus beat the devil around the bush in the future, that is to say, bring forward such plausible but distinctly erroneous arguments. We would have the local improvements desired, submitted to the State Legislature for endorsement, thus arming the district engineer officer with incontrovertible evidence of the local requirements, but, it may be said, river and harbor work is a national understanding and should not have the shadow of suspicion of state influence. Well! perhaps not, but what do we find; first, a number of merchants or manufacturers presenting unanswerable arguments to the engineer in favor of the locality they are personally and immediately, that is financially, interested in. This is followed by the unanimous vote of a Board of Trade or Chamber of Commerce (of which the merchants are leading members) forcibly urging the embodiment of the original recommendations in the engineer's annual report, and, as if a further pressure was necessary, the harbor and navigation committee of the city council, or a similar municipal body, takes up arms and insists that the suggested improvements, alterations or additions are not only essentially necessary, but absolutely imperative for the welfare of the general, that is, national commerce. Furthermore, not in any log rolling mood or wire pulling attitude and without any intent to influence national legislation in favor of Federal expenditures for local improvements, a private delegation is marched off to Washington at some one's expense, at, on or about the time that it is thought they can do the most good in a button-holing kind of way to carry their measures through a certain stage, chiefly though, by one of the delegates presenting their claims before the Committee on Rivers and Harbors. This mode of procedure we are free to confess has been found necessary, but it is a very irregular one and "off color" all through, so, to obviate all flummery we would suggest procuring the endorsement of the state legislature for presentation to the engineer in charge of the district. The engineer represents the federal government in the Secretary of War, through the Chief of Engineers. He is a soldier also an officer, (a la Sampson, sil vous plait). He is beyond the pale of municipal influences, his exemplary bearing and unquestionable professional superiority ensures an unbiased report on questions submitted to his judgment, nor is there any branch of the federal service more honorably and skillfully maintained than that of the Corps of Engineers, U. S. Army. Hence, Senator Carter's allusions to the district officers of the Engineer Corps in spite of his seeming apologetic strain were totally uncalled for and measures should be adopted to prevent a recurrence of such, let us say, vaporings.

A "CROWNERS' QUEST" has been held at Frisco over some of the bodies recovered from the lost Pacific Line mail steamer City of Rio de Janeiro, and it was discovered that they came to their deaths by drowning, or an equally fruitless verdict, later, the U. S. local inspectors of steamboats, who inspected the hull, machinery and equipment, also licensed the officers and vouched for their moral character, sobriety, skill and competency, will be called upon to hold an inquiry into the loss of the hull. A few months ago they said that they were all alright, but of course the hull, machinery, officers and pilot might have sadly deteriorated in the meantime. Let it be remembered that nature is but frail, and the weakest portion of a hull is not always found at the strongest part.

It passeth understanding to even surmise where and how some minds originate notions. It is but a little while ago that a surveyor employed by a district officer of the Corps of Engineers, U. S. A., in superintending the dredging of the approach to a lake harbor noticed that vessels were being increased in size and depth and more nearly smelled the bottom than formerly. Notwithstanding that this man was being paid his day's wage out of the congressional appropriation and that he had simply to report on the work done by the dredging company, he let himself out in an interview with a daily newspaper reporter and roundly scored vessel-owners for being hoggish, poured out a volley of vituperation on the innocent heads of shipbuilders, and wanted to invoke the aid of the powers that be in municipal, state and national legislation to limit the size of tonnage and prevent the construction of vessels drawing more water than his harbor approach could then accommodate. In discussing the provisions of the recent defunct river and harbor bill, we find the same idea cropping out in the mind and speech of another "know-all", something after this strain: "Let us once and forever improve a harbor to a certain depth and leave it there, then ships drawing more water than we have warranted could go elsewhere for and with their cargoes." Here is the surveyor's idea over again and the notion could only emanate from the brain of—of—well! let us say, an antediluvian or other mummified, petrified, all-fired lunatic.

CAPT. THOMAS DONNELLY doubts the existence of a clear fourteen foot channel in the upper St. Lawrence river, at least in spots. The masters of the Richelieu & Ontario Navigation Co.'s fleet say that they can pick their way at that draft all right. There is no use in going over arches and under bridges in this stretch of piloting let the channel be clear and well marked. If there are any shoal lumps secreted they ought to be shaved off at the earliest possible opportunity or a few groundings will work irreparable damage to the Montreal trade in so far as the upper lakes are concerned.

There is a lot of rot being printed and circulated, in fact partly believed in by the men themselves, or was until very recently that, because they were in possession of a license as master or engineer, it was unlawful to refuse to work. Let us say, that, having signed articles or an agreement, the case is entirely different and they are required to perform what they have undertaken to do. If any man held a dozen of these licenses pasted together, he needn't work unless he wanted to, other authorities to the contrary notwithstanding.

THE Dominion government ought to have an easy five fathoms of water at Montreal and a clear fourteen feet of water in the St. Lawrence river to reach there. As regards Montreal, it is a seaport in comparison with the principal lake ports, where three to four fathoms prevail. As Canada is now disposed to cater for a portion of the American lake trade, she can afford no old-time, slow-going policy in her work of improvements and offering every inducement for medium-sized tonnage to use the St. Lawrence route.

BECAUSE a U. S. local inspector of hulls personally superintended the swinging out and lowering away of a steamer's life-boats when in port, he need not be sent for should the same work be required when the craft was offshore. In lakes, bays, sounds, rivers or oceans, officers should be required and expected to know enough to save themselves, passengers and crew in shipshape order and without any undue detention.

THE thanks of the RECORD are due the Branch Hydrographic Office, U. S. N., Cleveland, for a copy of the "Notes on the Use of Charts," issued by the U. S. Coast and Geodetic Survey, Treasury Department, also for a copy of the tables of the Sun's Declination and Equation of Time for 1901, issued by the Hydrographic Office, Bureau of Equipment, Navy Department, Washington, D. C.

ANY firm that feels stuck for the names of a fleet of a dozen or two vessels would find a nice selection in naming them after the heroes of the Trojan war. For instance, Ajax, Nestor, Menelaus, etc. Of course, this is simply a suggestion, still it is unappropriated nomenclature in so far as the lakes are concerned.

IF labor trouble is to become general on the lakes it might as well come this season as any. People ought to know "where they are at." This is a question of labor and skill versus dollars and commerce.

THE SEA AND LAKE INSURANCE CO.

The organization of a \$750,000 insurance company to insure lake hulls and cargoes on the Great Lakes, was perfected at Buffalo a few days ago under the title of the Sea & Lake Insurance Co. All its capital stock has been subscribed, and its stockholders consist chiefly of large owners of lake hulls and cargoes.

The head office of the company will be in Chicago, with George L. McCurdy, the well known Chicago man, as its underwriter. One of the company offices will be in Buffalo, Capt. Edward Smith in charge. Capt. Smith represents the Cleveland, Buffalo, New York, Philadelphia, and other eastern subscriptions to the capital stock of the company, all of these subscriptions being made through him. Capt. A. B. Wolvin, president of the Lake Carriers' Association, will be the agent and representative of the new company in Duluth. Capt. D. Sullivan will represent the company in Chicago. Local agents will have offices in Cleveland, Detroit and other ports along the lakes. The aforementioned men will be active managers of the company's interests in their respective ports.

The company will do a general business in marine insurance. It will insure boats, cargoes, builders' risks, marine accidents, in short, everything that pertains to marine insurance.

Vessel owners feel a keen interest in the advent of the Sea and Lake Insurance Co. They are aware of the high standing and large interests of the men who will represent the company at the various ports along the lakes. The company will not need to do much soliciting for a solid bulk of business at the outset. It has it in hand from its own subscribers, whose financial standing and marine prominence are known to all men along the Great Lakes.

The older companies, of course, will endeavor to keep the business they have had before the new company entered the field with modest sum of \$750,000 subscribed capital.

A MERITED REBUKE.

We are surprised at the stand which Capt. Stewart has taken in the matter of engineers refusing to ship. Should I attempt to coerce him, nay order him to take a trip to the North Pole, he would very likely ask me to kindly go to the other extremity of temperature, and that's a good way to spell h-ll, too. However, the following open letter to the U. S. Local Inspector of Hulls at Port Huron is self explanatory, moreover, it is a well merited rebuke:

To the Editor of The Herald:

An article appeared in the Times of March 1, in which Capt. Stewart, local inspector of hulls, said that he had many decisions in his office from the Secretary of the Treasury which says a marine engineer cannot go on a strike. Now, we wish to put the local inspector on the right track.

The marine engineers are not going on a strike, they are simply going to stay at home, and take up some other vocation until such time as the Lake Carriers' Association accedes to their demands. The Marine Engineers' Association of this city is composed of men who claim to have common sense and ordinary intelligence, and believe that the profession which they follow for a livelihood requires as much skill as others of similar character.

Believing this, we wish to impress on our worthy inspector that the marine engineers of this city at the present time do not need any advice from him on this matter, for we have a man at the head of our organization who is fully able to advise us in all matters. (Signed):

MARINE ENGINEERS BENEFICIAL ASSOCIATION.

Port Huron, Mich., March 2.

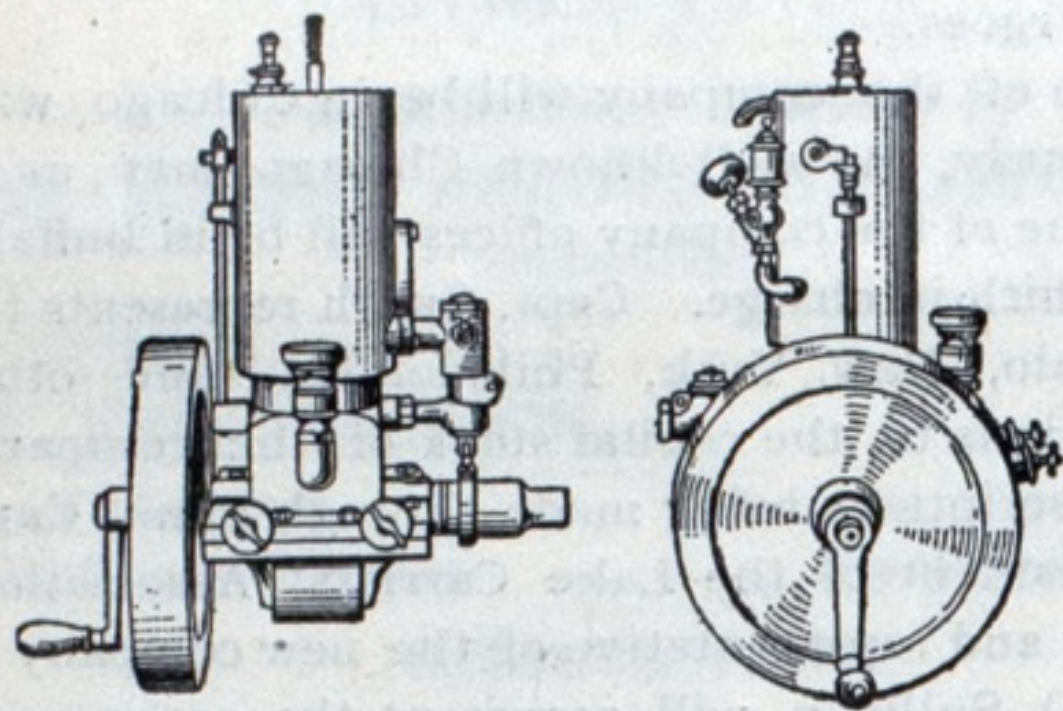
CONGRESSIONAL APPROPRIATIONS.

Rep. Cannon, chairman of the house committee on appropriations, and Rep. Livingstone, the senior Democratic member of the committee, have prepared statements of the appropriations of the fifty-sixth Congress, which place the total appropriations at \$1,440,062,545, those for the first session being \$710,150,862 and for the second being \$729,911,683. The previous Congress spent \$1,568,212,637, and the fifty-fourth appropriated \$1,044,580,273. Of the total appropriations made at this session at least \$30,000,000 will not, in the light of past experience, be expended.

MR. CLERGUE, of "Soo" fame, may induce the Canadian Government to add a very liberal reserve fund to the capitalization of the proposed Canadian Lloyd's Underwriters' Association, but the experiences of the Western Assurance Co., Toronto, as also the Montreal Marine Underwriters' Association should be taken into account before the new company is launched and ready to accept premiums,

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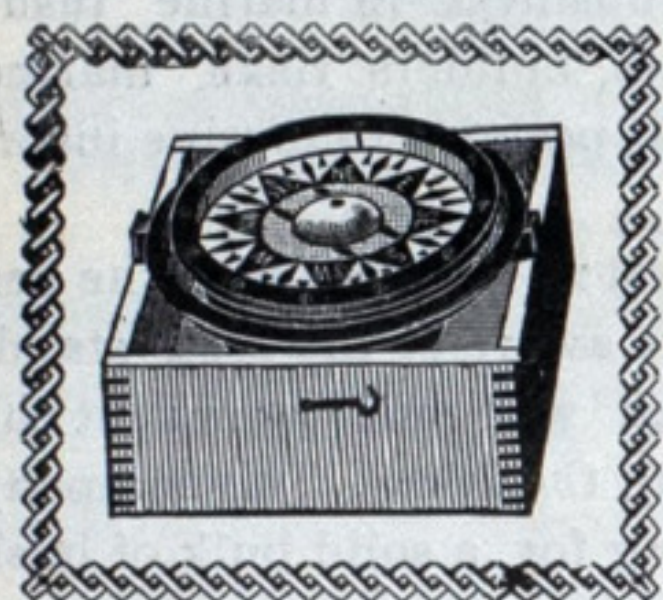
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SOUTHERN PORTS FLOURISHING.

Arthur I. Street, in an interesting article on "Traffic and the Country," in Ainslee's Magazine, deals with the tendency of the trade of the west to seek an outlet to Europe by way of the southern ports rather than those of the north Atlantic.

Twenty years ago, he says, nearly everything gravitated toward New York, Boston and Philadelphia. The raw products of the west tumbled over themselves to reach the manufacturer of the east, and the retailers of the west sent their orders to the jobbers of the Harlem and the Schuylkill.

But in the latter portion of the '70s the process began to stop and it has been stopping ever since. The food stuff and raw material have found that home is a good place to stay at, and grocers, furniture dealers, clothiers and shoemakers think that freight charges saved are better than trade-marks of old firms on the Atlantic.

There are mountains and rivers between the west and south on the one hand, and the north and east on the other, the commodities of trade, like human beings, climb and swim only for necessity or for sport. Grain refuses to go up the Blue Ridge in order to get down to the Atlantic, because it can reach the ocean at the gulf or the Great Lakes with half the effort.

Prior to 1879 the north Atlantic ports controlled and operated all the railways, using them to their own profit, regardless of the welfare of the country from which they fed, but with the closing of the '70s the agricultural wealth of the Ohio states rose to such an enormous volume that it broke through the artificial lines of traffic by main force, and a short line was built from Cincinnati to Chattanooga and Atlanta. The move at once placed the middle west in touch with the south, creating a natural channel of transportation.

Almost simultaneously with the change in the Ohio region the grain and live stock trade of the farther west became too large to be contained within the channels leading to Toledo, and made a break for the nearer lake port at Chicago. Chicago, St. Louis and Kansas City raised the funds for a direct line from the Missouri and Mississippi to Chicago—the Chicago & Alton railroad. This road proved as revolutionary in its influence on traffic as had the Cincinnati Southern. Chicago shot straight to the front as one of the most potential traffic points of the Union.

The same process went on still further into the new regions of the west, the traffic, like water, always seeking its natural level. Three or four years later the prairies of the Dakotas and the well watered upland of Minnesota had begun to pour out wheat almost like sand, and the pressure was too great to flow freely to Chicago.

An incipient effort of the grain to reach near tidewater at Duluth brought on one of the sharpest and most bitterly contested fights in American history. The end was inevitable,

Duluth went into competition with Chicago, and created a water terminal for two transcontinental lines, the Great Northern and the Northern Pacific.

The same thing happened with reference to the product of the Missouri states and Texas. A short line of railroad was built from Fort Scott and Kansas City to Memphis, and the farther west was then in direct communication with the south, an evolution which has increased steadily in volume until with the recent evolution of industry in the south it is one of the most notable and important of American traffic currents.

No one knows what may come from across the Pacific, but the strategic maneuvers of the transcontinental railroads suggest that important traffic alterations are expected. An ocean 6,000 miles wide is now an element in the traffic condition of the United States—an additional factor to operate against the concentration of business at the small end of the funnel.

New York is doubtless on the direct line of international travel and trade, located where it may be the monetary center of the world for a long time to come; but in the United States at large numerous traffic and business areas are growing, each of which is defined by conditions of physical geography, and each of which lies beyond the immediate control or the centralizing power of the nation's metropolis.

SUMMARY OF ICE CONDITIONS.

The Weather Bureau sends out the following ice report under date of March 12:

The reports from the several regular and display stations of the Weather Bureau on the lakes indicate that the ice has been broken up to a considerable extent by high winds of the past week, on all the lakes. On Superior there appears but little ice over the western end, and it is breaking up about the islands; considerable ice is reported off Keweenaw Point and from Whitefish Point, westward as far as can be seen from that point. There has been no material change in the St. Mary's river. The ice remains solid in Green Bay, and but little ice is reported along the west shore of Lake Michigan, while on the east shore the high easterly winds of the past week have moved the large field out into the lake; the ice remains firm at the Straits. There is not as much ice reported in Lake Huron; the ice-bridge is formed at the foot of the lake and extends northward about six miles. The ice is beginning to run out of the extreme lower end of Lake St. Clair, and the Detroit river is open as far down as Sandwich Point. The ice in Erie appears to have been broken up by the high wind and there is not as much reported along the shore as was the case last week; the field has probably moved over to the Canadian shore. There has been no material change in the conditions on Ontario.

NOTES.

IN Liverpool, interest now centres on the huge vessel which is to be launched from Messrs. Harland & Wolff's yard on April 4th, as the latest addition to the White Star, Liverpool-New York fleet. We are told that she will be 700 ft. long, 75 ft. broad, with a gross register of 20,000 tons. This leviathan will hold the world's record as regards size. She will be the largest steamer afloat, but it is not intended that she should be a record breaker as regards speed, a point which engineers here view as of no little significance in its relation to the momentous and difficult problem of ocean speeds, especially as the keel of another steamer which is to be of the same dimensions as the steamer spoken of has already been laid in Messrs. Harland & Wolff's yard.

PORTLAND CEMENT—Addenda to 20th century cement, published by the MARINE RECORD PUBLISHING CO. Carbonized Portland, like carbonated Rosendale cement, does not attain its full strength at short dates. In this respect it fulfills the well known conditions indispensable for permanence, i. e., slow crystallization. As Faija says: "If the increase of strength in cement from seven to twenty-eight days be only ten per cent. it has practically told its history, and the ultimate strength to be expected of it is known within a fraction." Sand tests are now universally recognized as the only correct means for deciding the value of cements. Neat cement often gives high tests, which are not confirmed when sand is added. Carbonized or carbonated cement complies with both these conditions. It crystallizes slowly, and with sand gives better results than the ordinary Portland. The effects of the applied carbon resemble the conversion of sandstone into flint, and there is no cracking.

HERR ANSCHUTZ-KAEMPFE, a noted German scientist, read a paper recently before the Imperial Geological Society of Vienna describing in detail a plan to reach the North Pole by a submarine boat. The boat will work her way as a surface boat until stopped by the pack. An officer will then mount a ladder 45 feet high, take observations of the nearest open spot, and the submarine will dive and make for it. The compass and gyroscope will insure her correct steering. The professor says that the vessel required for the purpose must be able to dive to a depth of 150 feet, or about three times the distance to which submarine boats at present constructed have been taken. She should be so solidly constructed as to be able to resist a pressure of 150 tons to the square inch, and as her displacement is to be 800 tons, she would offer a tremendous surface for such a pressure. It is also necessary that she should have radius of action under water of 2,500 English miles. The New York Marine Journal says: This begins to look like the real thing in submarine navigation, and we hasten to call the attention of certain members of Congress to it. At the same time we do not think they will be justified in antagonizing submarines for the navy until this German professor has reached the Pole in his boat and towed the same up the Potomac and set it up in front of the Capitol.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, report the condition of the eastern freight market as follows:

Chartering for grain cargoes has been on a rather limited scale and in most instances at reduced figures. For the time being shippers appear to have pretty well filled their requirements and tonnage is now offering to accept 2s 10½d. to Cork f. o. and finding difficulty in getting charterers to accept this rate. The only business that has shown any activity has been from the Gulf for general cargo trades and the rates reported in this issue will show that an advance has been conceded by the shippers for tonnage in position to make this month's loading. There is still a little inquiry for April boats on the basis of 14s net to U. K. or Continent. The timber charterers from the Gulf have taken a fair amount of boats within the last few days, but the rates paid are, if anything, at slightly reduced figures. The market generally cannot be described as anything but dull and until the supply of available tonnage is reduced, we fear there is not much prospect for an improvement in freights.

A rather easier feeling prevails as regards sail tonnage, and although offerings of ships suitable for long voyage business continue scarce, shippers are either avoiding the market, or have lowered their views to correspond, doubtless, with the late decline in steamer freights.

MASTERS APPOINTED.

The Rutland railroad line has made the following appointment of masters for the steamers of its line. James R. Langdon, Capt. Harvey Howard; Henry R. James, Capt. James Owens; F. H. Prince, Capt. David Kiah; Alexander McVittie, Capt. William Waite; Governor Smith, Capt. William Shea; William H. Haskell, Capt. Edward Shea. William J. Averell, Capt. Thomas Hough; Walter L. Frost, Capt. William Plumb. The list of engineers accompanies the report but it seems useless to print any of these names when the engineers don't care about joining the boats until the wages strike and the other demands are complied with.

A dispatch from Washington states that the Treasury Department is determined that the investigation into the disaster to the steamship Rio de Janeiro at San Francisco, by which scores of passenger lost their lives, shall be as searching as possible, to determine the responsibility of the Life Saving Service in the matter. The Department has been officially informed of the investigation already ordered by the superintendent of the Fort Point Life Saving Station, and heartily approves of it. This will be conducted by Superintendent Blakeny and Inspector Munger. The department was also informed of the statement made by the Norwegian, Mark Ellison, the surfman who was on watch at Fort Point station when the disaster occurred, embodying the confession that he heard signals of distress from the Rio de Janeiro but did not heed them. Superintendent Kimball of the Life Saving Service said that in all the history of the service a case of negligence of duty had never occurred, and he desired to make an example of the present instance, provided that the investigation shows that anybody is guilty. He approves the immediate suspension of Surfman Ellison from duty.

A NEW INSURANCE COMPANY—GOVERNMENT BACKING ASKED.

MR. CLERGUE AGAIN THE RULING SPIRIT.

Mr. F. H. Clergue interviewed on the subject of the new project for facilitating the St. Lawrence navigation, said: An association is being formed by those established in the business of navigating the St. Lawrence, for the purpose of exerting their united efforts to

1. Improve the navigable channel of the St. Lawrence and make the aids to navigation there the most perfect possible.

2. Reduce to the lowest minimum the losses which may occur in the river and gulf by providing and maintaining a salvage and wrecking plant, which shall effect quick relief at the lowest cost. This plant will also be used to test the practicability of winter navigation of the gulf and river.

3. Cover shipping bound to or from the St. Lawrence with sound insurance at rates as low as these improvements and remedies may justify. It is not the intention of those engaged in this project to institute an arbitrary scale of insurance rates, which shall disregard the lessons taught by experience; nor do they announce themselves as bringing forth a plan which shall instantaneously expel other underwriters from the opportunities of the Montreal market. They are simply engaged by the investment of their own capital in an attempt to prove to foreign underwriters that the present advantages of the St. Lawrence navigation are not receiving due credit, while they will also press forward the improvements now under way. They hope they will succeed so well as to soon induce the English Lloyds and other underwriters to join in a schedule of rates which will more fairly represent the risks of the business. The Government has been asked to co-operate in these plans, and the subject is now being considered. Although the authorized capital is \$5,000,000, the business of the company will be commenced when \$1,000,000 of capital is paid in, and this sum has already been provided for. As the innovation will involve untried risks for the benefit of all Canada, the association claims that the government should add a reserve fund to the million risked by the shareholders, and they will not go on if the government decides adversely.

CHICAGO AS AN OCEAN PORT.

It is not so many years ago since we saw on the Tyne a little centerboard craft that had made her way from Chicago to the great North-country port. A member of the firm which transacted the little vessel's business remarked, when clearing her, "We shall probably never hear of her again." And it was so. But things have changed and grown during the intervening period. And now we find ships of between 3,000 and 4,000 tons, with a speed of 15 knots an hour, launched at Chicago, to take part in the trans-Atlantic trade as soon as the navigation of the St. Lawrence is opened.

During the year ended June 30, 1899, as learn from the report of H. M. Consul, the number of vessels clearing from Chicago aggregated 8,874, against 6,835 for New York, and 2,880 for Baltimore.

Four ocean-going ships are being built for the North Western Steamship Co. The first of these, the North Western, was launched on December 29 last; the Northman was launched on the 7th of last month, and the North Eastern and Northtown are expected to be ready for launching before the ice has broken up in the St. Lawrence. This fleet of four ocean-going vessels (the first ever built in Chicago) will cost about £200,000, and each will measure 3,200 tons, and have a speed of 15 knots.

This is a commercial departure of great importance. It will enable American merchants and others to export iron ore, timber, meats, provisions and fruit (especially peaches and apples) to Europe at a much smaller cost in freight than has hitherto been possible, owing to transshipment, railway charges, etc. And these vessels will be able to carry the products of Europe back to the great center of American railways at the foot of Lake Michigan, at a much reduced cost of carriage compared with the old routes. This question, as our consul at Chicago points out, is one deserving of the closest attention, not only on the part of our importers and exporters, but also by our shipowners, who may very fairly and successfully take part in this trade by way of the Atlantic, the St. Lawrence, and the Welland canal.—The Shipping World, London.

Government Proposals.

U. S. ENGINEER OFFICE, Custom House, Cincinnati, Ohio, March 6, 1901. Sealed proposals for building 500 feet length of Chanoine dam of navigable pass at Dam No. 2, Ohio river, will be received here until 2 p. m., April 10, 1901, and then publicly opened. Information furnished on application to WM. H. BIXBY, Maj., Engrs., at this office, or to WM. MARTIN, resident engineer, Davis Island Dam, Bellevue, Pa. 10-14



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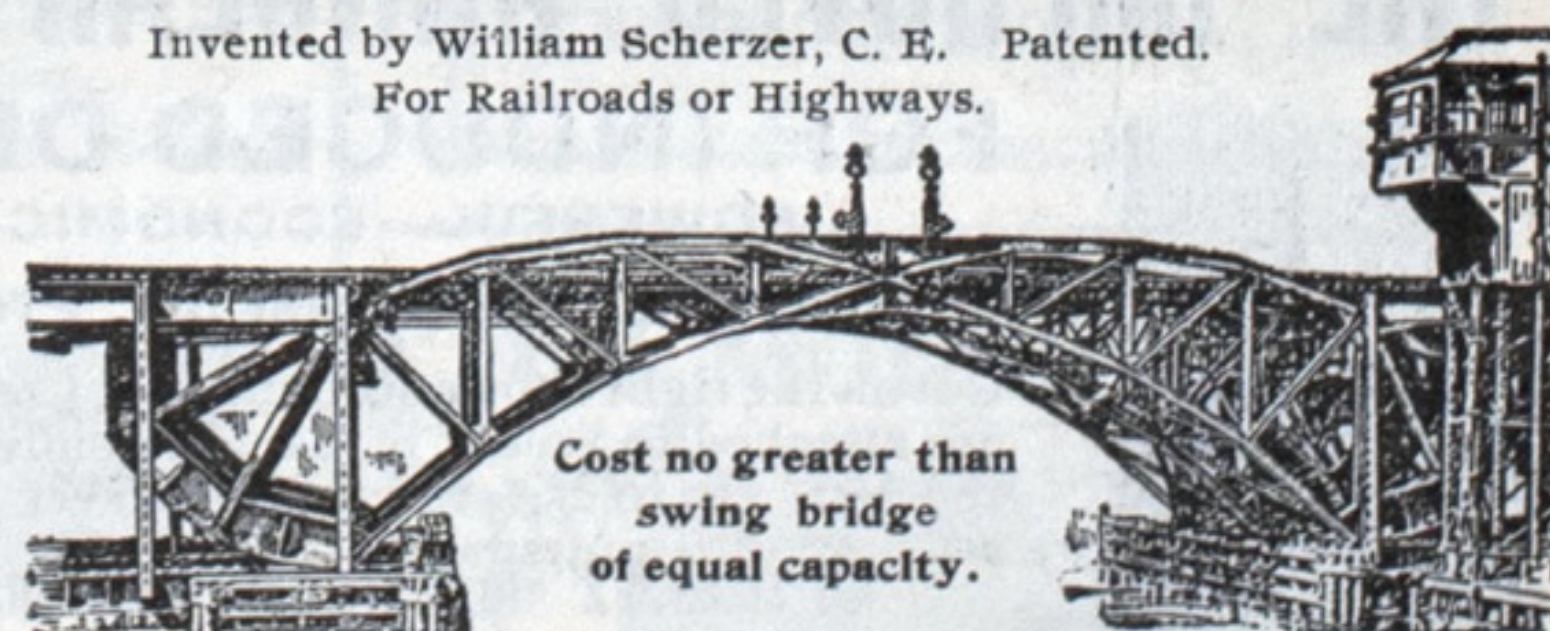
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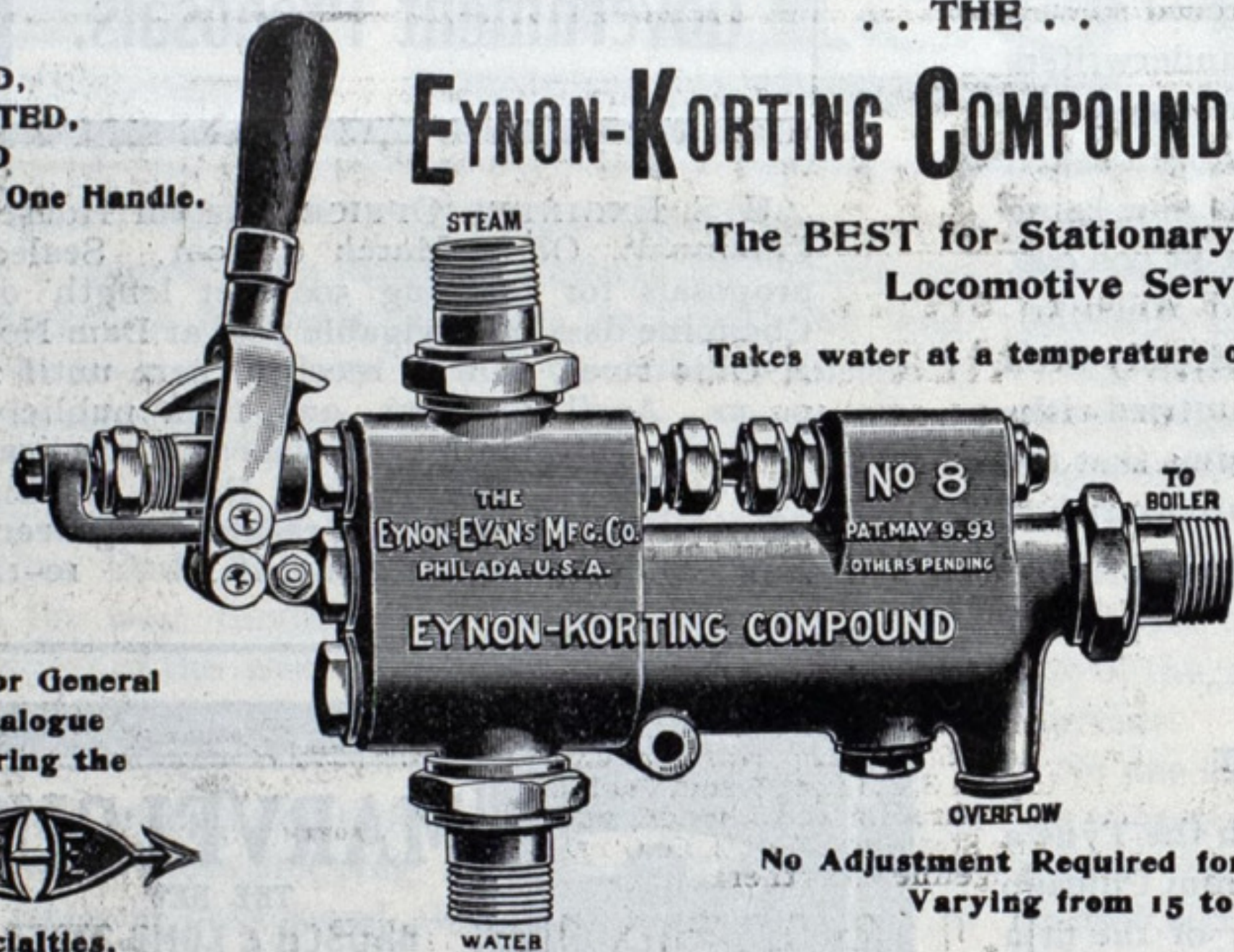


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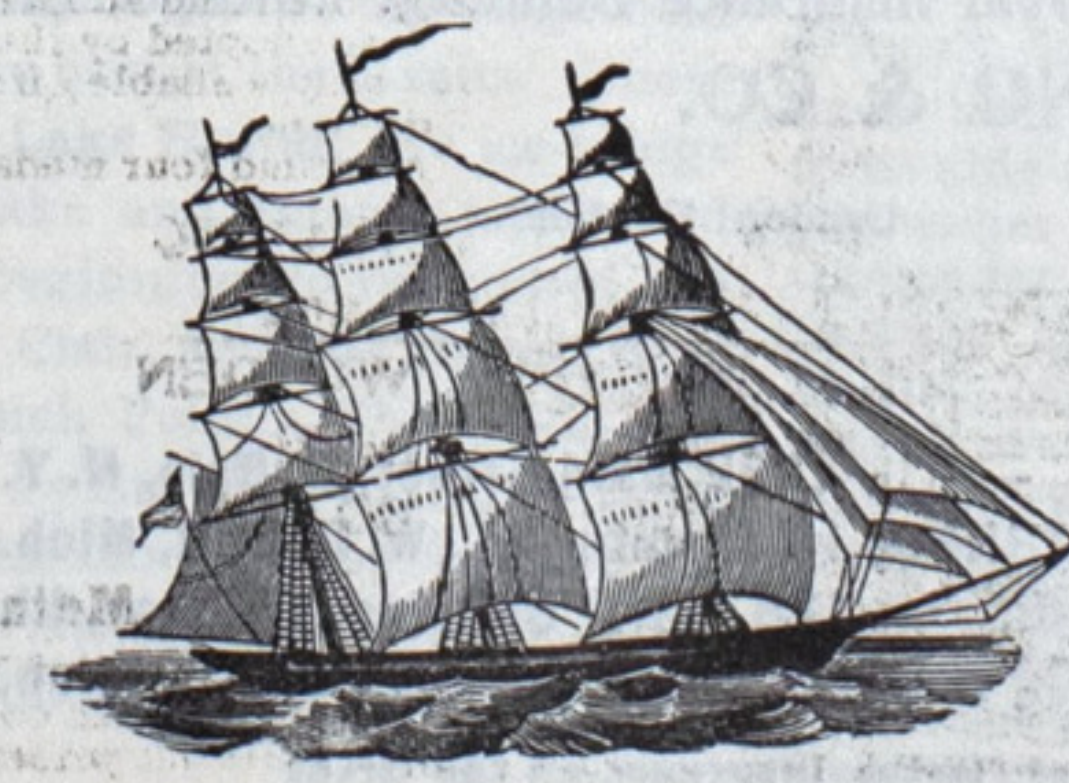
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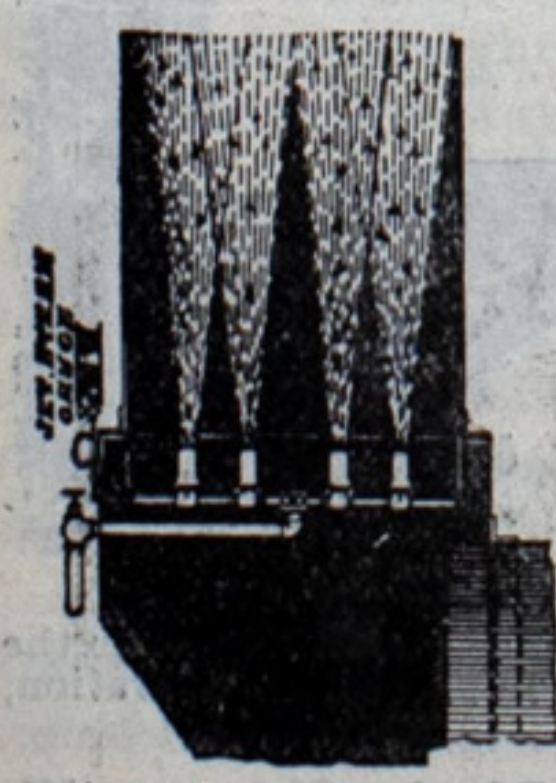
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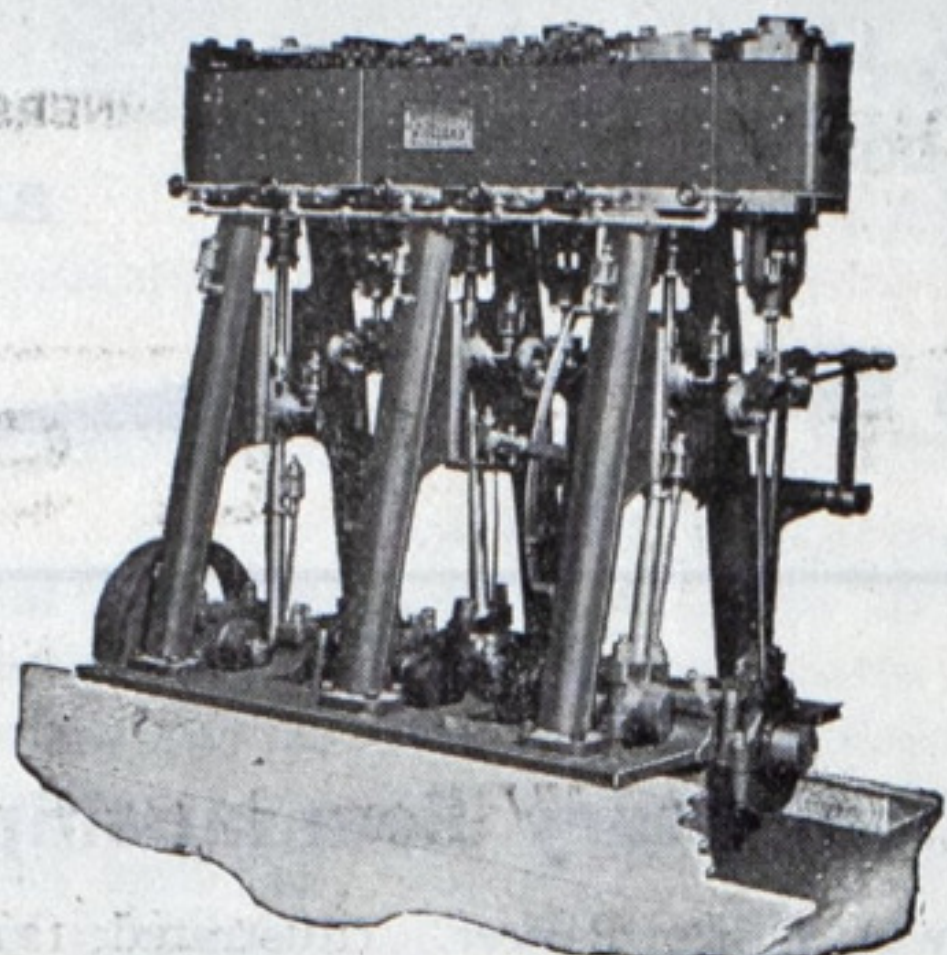
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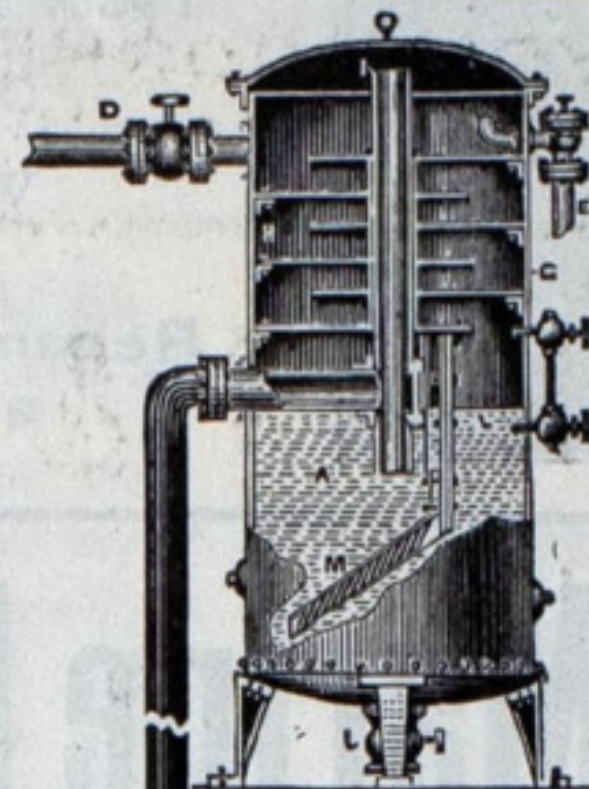
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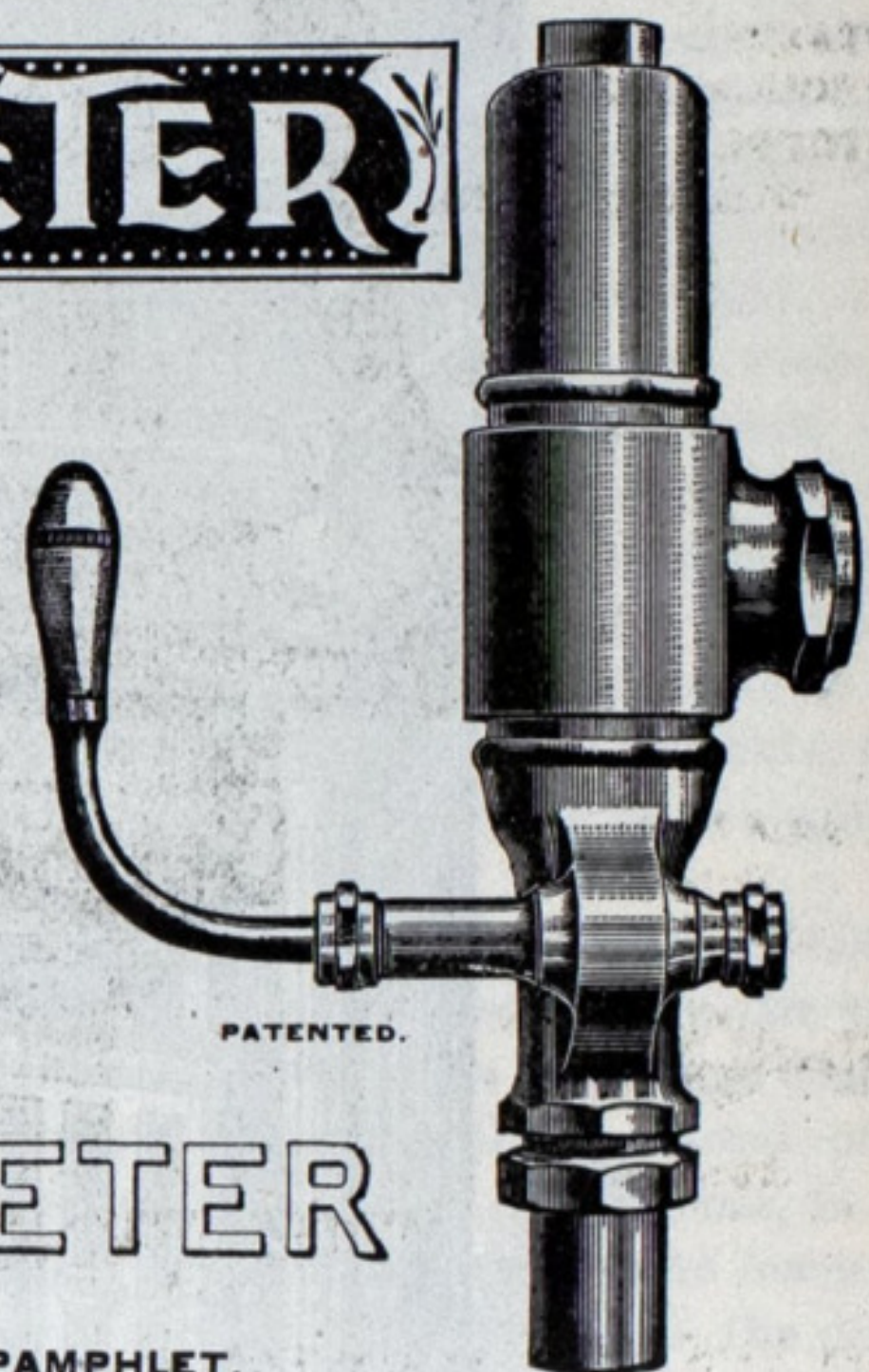
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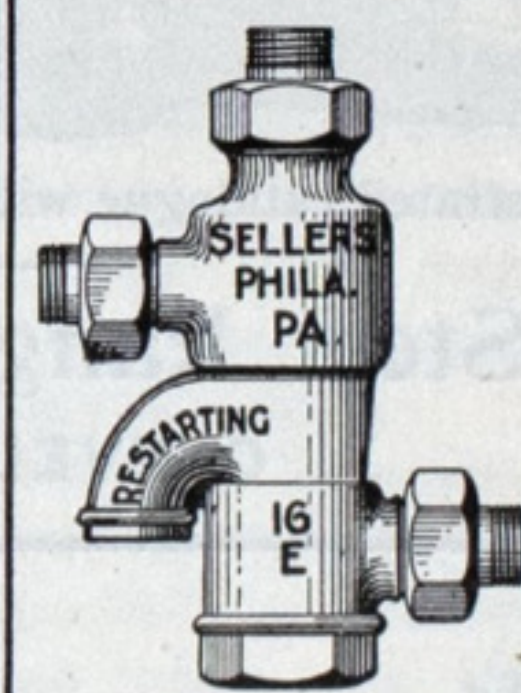


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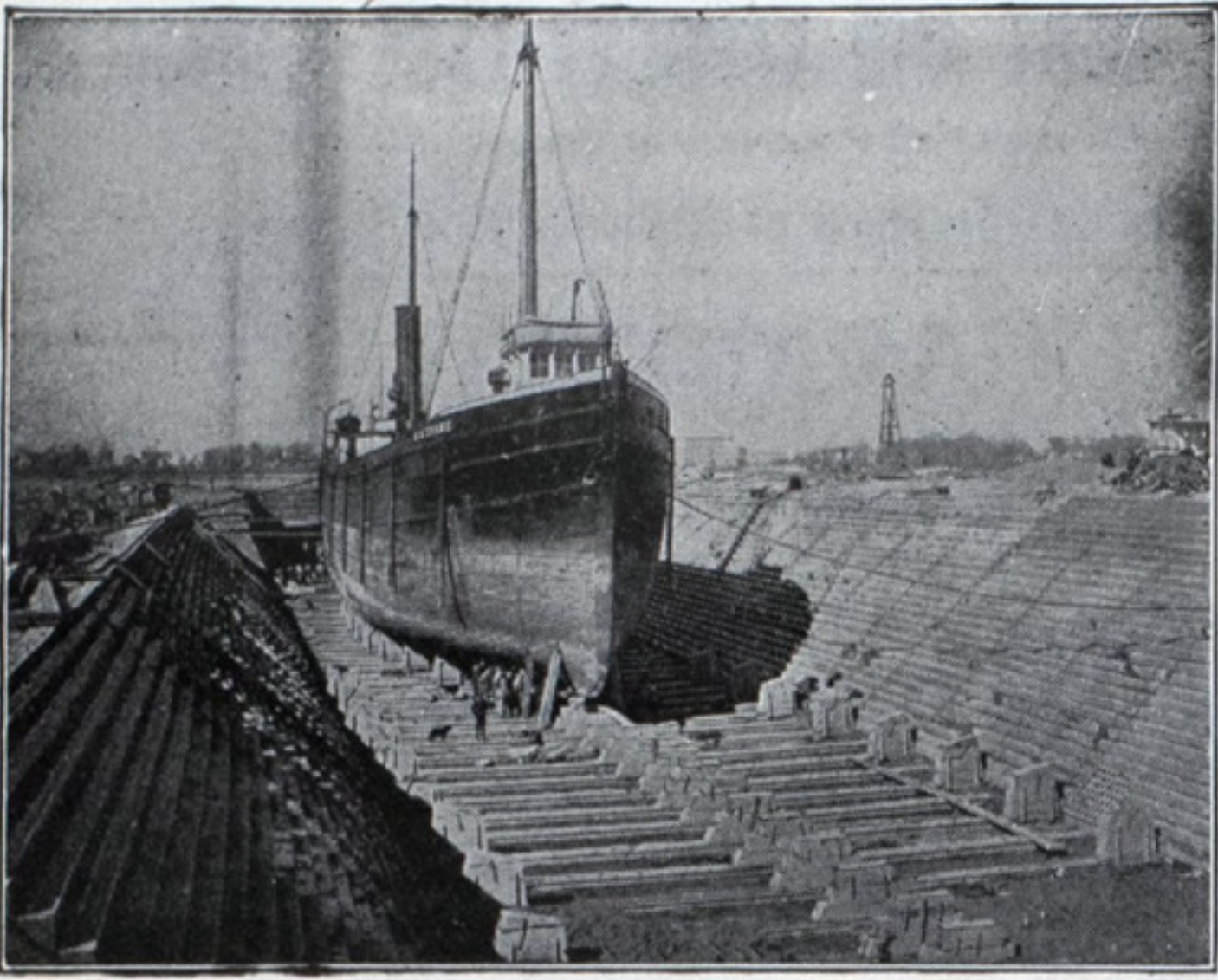
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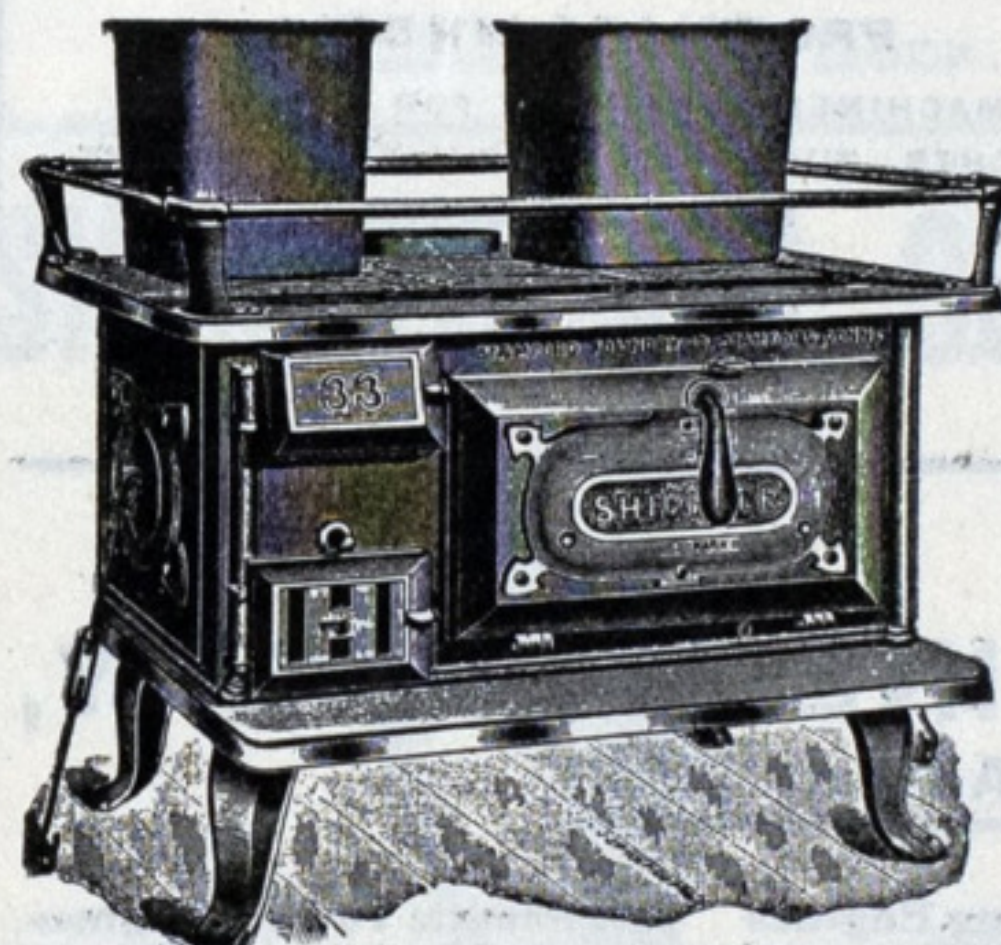
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